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UNITED STATES DISTRICT COURT
 NORTHERN DISTRICT OF CALIFORNIA
 SAN JOSE DIVISION

MAXIMILIAN KLEIN, et al., on behalf of themselves
 and all others similarly situated,

Plaintiffs,

v.

FACEBOOK, INC.,

Defendant.

Case No. 20-CV-08570-LHK

The Hon. Lucy H. Koh

**CONSOLIDATED ADVERTISER CLASS
 ACTION COMPLAINT**

DEMAND FOR JURY TRIAL

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INTRODUCTION

1. This Complaint is brought on behalf of people and companies—including each of the named Plaintiffs—who bought advertising from Defendant Facebook, Inc. (“Facebook”) at anticompetitively inflated prices. Over the course of the past decade, Facebook devised, executed, and reaped the benefits of a scheme to unlawfully monopolize the market for social advertising. As a direct result, Facebook was able to (and in fact, did) charge supracompetitive prices for social advertisements to thousands of people and businesses, including Plaintiffs Affilious, Inc., Jessyca Frederick, Mark Young, Joshua Jeon, 406 Property Services, PLLC, Mark Berney, Jessica Layser, Katherine Looper, and Zahara Mossman.

2. The nature, and indeed, fact of the anticompetitive overcharge levied by Facebook on the Plaintiffs and others similarly situated was not known until very recently—because CEO Mark Zuckerberg and his lieutenants throughout Facebook specifically worked to keep their anticompetitive scheme under wraps. But recent revelations—including publicly revealed internal Facebook communications and documents—make indisputably clear that Facebook intentionally and unlawfully monopolized the social advertising market; charged supracompetitive prices to Plaintiffs and other Facebook advertisers; lied about it to Plaintiffs, developers, regulators, the press, and the public; and reaped billions of dollars in inflated social advertising revenues in the process.

3. Facebook acquired the power to raise prices through the anticompetitive scheme described below and did so year after year with no competitive check.

* * *

4. By the end of 2010, after Facebook had emerged the victor among social networks such as MySpace and Friendster, Facebook faced a new threat from smartphones. Mobile applications (“apps”) on smartphones for the first time allowed users to access the Internet from any location, on user interfaces controlled by touch, providing a distinct experience from desktop or laptop computers. Special-purpose apps designed specifically for smartphones and smartphone web browsers could not only access the Internet, but also users’ address books—a ready-made, proto-social network from which apps could draw.

1 5. The rise of smartphones immediately threatened Facebook’s advertising business, which
2 had plateaued as Facebook rapidly approached its initial public offering in 2012. It was clear that the
3 digital future was moving toward mobile platforms, and Facebook’s mobile product was substandard.
4 Indeed, most of the advertising market would soon be designed for mobile platforms, and Facebook was
5 likely to be left out. Mobile apps also threatened user engagement on Facebook’s core product (a desktop
6 web app), and reduced engagement would in turn reduce the demand for Facebook’s targeted social
7 advertising. Facebook faced a vicious negative feedback loop that could destroy its business.

8 6. That is when, according to internal Facebook documents, Facebook’s founder and CEO,
9 Mark Zuckerberg, as well as Facebook’s most senior executives, hatched and executed a plan to
10 (a) neutralize any potential competition from tens of thousands of mobile and mobile-friendly apps built
11 using Facebook’s own platform (called “Platform”), (b) conscript apps on its Platform to bootstrap
12 through large advertising purchases Facebook’s fledgling NEKO mobile advertising product with
13 restrictive tying agreements, and (c) acquire, kill, or clone competitors that could rival Facebook as a
14 source of social user data, which would in turn threaten Facebook as a preeminent and unopposed
15 platform for social advertising.

16 7. Facebook executed its scheme with the help of spyware created by a company it ultimately
17 acquired, Onavo, which—by deceiving millions of mobile users into believing they were downloading
18 apps with utility (such as a virtual private network app)—provided Facebook with real-time surveillance
19 of its competitive threats. This real-time surveillance apparatus allowed Facebook to identify mobile app
20 developers from which to demand advertising purchases or data sharing agreements. It also allowed
21 Facebook to identify rapidly growing threats to its core social networking product—such as Instagram
22 and WhatsApp, which Facebook acquired, and Snap, which Facebook failed to acquire and instead
23 cloned.

24 8. From 2012 through 2015, Facebook quietly executed its scheme. Its senior lieutenants
25 cataloged and bucketed third-party apps on its Platform according to whether they were aligned with
26 Facebook’s business, were competitive or potentially competitive with Facebook, or were to be
27
28

1 destroyed. During this same period, Facebook’s senior-most engineers—many acting under protest—
2 prepared to gut Facebook’s Platform of its most important functionality.

3 9. The functionality Facebook would remove from its Platform went to the heart of the
4 Platform itself—the application programming interfaces relied on by apps to traverse Facebook’s network
5 of user connections and to access user timelines and/or news feeds (the “Core APIs”).

6 10. Facebook decided to deceptively announce the scuttling of its own Platform at its “F8”
7 conference held on April 30, 2014. That is, out of concerns that the announcement would cause vocal
8 protests among developers whose business would be destroyed by the move, Facebook planned to bury
9 the announcement under a broader announcement about its Facebook Login product. Internally,
10 Facebook’s senior executives and engineers referred to this plan to bury the change as the “switcharoo
11 plan.”

12 11. On April 30, 2014, at F8 2014, Facebook, as planned, misleadingly folded in the
13 announcement that the Core APIs would be removed with its announcements surrounding Facebook’s
14 Login product. The alleged premise of the conference and of the Login product changes was to allow
15 users more control over their data. Facebook did not even mention the APIs it was withdrawing at the
16 conference, quietly announcing the deprecation of the Core APIs in a change log, and falsely stating in
17 an FAQ that Facebook would be removing “rarely used” APIs.

18 12. On April 30, 2015, one year after its deceptive FAQ, Facebook ejected 40,000 apps from
19 its Platform by breaking them. At and around that time, Facebook communicated more pretext
20 surrounding its decision, systematically lying to developers and telling them that Facebook’s API
21 decisions were driven by user privacy and the need to curb privacy abuses. Internally, however,
22 Facebook’s most senior executives had called those reasons “False” and “pabulum.”

23 13. While Facebook systematically lied to developers and the public about its Platform
24 change, it quietly forced deals with targeted app developers on its Platform. These chosen developers
25 could continue to use particular Core APIs (which Facebook told others were “going away” for everyone),
26 so long as they entered into agreements with Facebook to (a) purchase large amounts of mobile
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1 advertising from Facebook, or (b) feedback their own users' data to Facebook. The agreements between
2 Facebook and these developers were anticompetitive on their face.

3 14. Destroying or conscripting apps on its own Platform was not the only thing Facebook did
4 as part of this scheme. Facebook also acquired, killed, or cloned companies that its deceptive spyware,
5 Onavo, had identified as having rapidly obtained user engagement and large user bases. Most notably,
6 Facebook acquired Instagram and WhatsApp to prevent these products from emerging as sources of data
7 and user engagement that could fuel a rival social advertising platform. And when Snap rejected
8 Zuckerberg's \$3 billion acquisition offer, Facebook cloned Snap's product with precision.

9 15. Over the course of several years beginning in approximately 2010-2011, the net effect of
10 Facebook's Platform changes, its unlawful agreements with app developers, its Onavo spyware, and its
11 unlawful mergers and acquisitions was that Facebook (a) coerced massive advertising purchases from
12 developers; (b) captured and exercised control over data that could otherwise fuel a rival social
13 advertising platform through whitelist and data sharing agreements; (c) destroyed rivals not beholden to
14 Facebook to prevent them from emerging as competing advertising platforms or sources of social data;
15 and (d) destroyed apps that threatened user engagement with Facebook's core product, and thereby
16 Facebook's social advertising products.

17 16. As the 2010s wore on, technological developments in header bidding and Google's
18 acquisition and deployment of powerful machine learning tools across its growing data collection
19 ecosystem threatened to erode Facebook's identity-based targeting advantage—and perhaps even
20 superset the Social Advertising Market. Facebook responded by acquiring and expanding powerful cross-
21 site and cross-device tracking tools, deploying its own machine learning tools outside its walled garden,
22 and laying the groundwork to enter programmatic advertising and other Google-dominated online ad
23 markets. By 2018, the two online advertising titans—each with its own long-running sphere of
24 dominance—were headed for a direct clash.

25 17. Except that instead of competing, Facebook and Google actually cut an anticompetitive
26 deal. Codenamed "Jedi Blue," this September 2018 agreement between Facebook and Google divided
27
28

1 markets between the two companies and not only reinforced but bolstered Facebook’s dominant position
2 in the Social Advertising Market.

3 18. Pursuant to the Jedi Blue agreement, Facebook dropped its support for header bidding,
4 effectively ceding the programmatic and exchange-based ad markets to Google. At the same time, Google
5 agreed to provide Facebook powerful tools to identify, target, and monetize Facebook’s own users on the
6 web and across third-party mobile applications, then give Facebook priority over 90% of advertisements
7 to these users and twice the amount of time to bid on advertising to them.

8 19. The net effect was that Facebook remained the dominant—and only—source of granularly
9 targeted advertising to its social-networking user base. In exchange, Facebook backed away from
10 Google’s advertising exchange business, including by forgoing the adoption of “header bidding.”

11 20. As a result of the conduct set forth above, Facebook became and remained for nearly a
12 decade the dominant (and in many respects, sole) source for highly valuable advertising that could
13 precisely target networks of users in a social network. Facebook has used this market power to repeatedly
14 raise advertising prices every year since it began its scheme.

15 21. Over the course of nearly a decade, Facebook has faced no meaningful competitive check
16 on social advertising prices—and it has extracted supracompetitive revenues from advertisers like
17 Plaintiffs throughout this period.

18 22. Plaintiffs are advertisers on Facebook’s advertising platform that were injured by paying
19 supracompetitive prices for social advertising. The prices they paid would have been lower if Facebook
20 had not unlawfully monopolized the Social Advertising Market and taken unlawful acts (including an
21 express anticompetitive agreement with Google) to maintain that monopoly, as those prices would have
22 been subject to competitive forces that would otherwise exist as a check on Facebook’s market power
23 and monopoly.

24 23. Facebook managed to hide its anticompetitive scheme through (a) a code of secrecy in the
25 face of a duty to speak truthfully and fully about its Platform, (b) affirmative false and pretextual
26 statements to developers and the public about the reasons for its decision to destroy its own developer
27 ecosystem, and (c) false and misleading statements to regulators that approved Facebook’s acquisitions
28

of WhatsApp and Instagram. Facebook’s ruse largely succeeded until internal documents, which were seized by the UK Parliament in 2018, were published in full by NBC News and other news organizations in November 2019, and until details about its secret “Jedi Blue” agreement became public at the end of last year.

PARTIES

I. PLAINTIFFS

24. Plaintiff Affilious, Inc. (“Affilious”) is a California corporation with its principal place of business in La Quinta, California. Affilious is an internet publisher firm that operates several websites, including WineClubReviews.net. In late 2016 and in August 2017, Affilious purchased advertising on Facebook’s self-service advertising platform to promote WineClubReviews.net. Until no earlier than November 6, 2019, Affilious did not know, and could not reasonably have known, the truth about Facebook’s anticompetitive conduct, including its purpose and intent to engage in anticompetitive conduct, nor could it have known that it had been injured by paying supracompetitive prices for advertising.

25. Plaintiff Jessyca Frederick is a citizen of the State of California. Frederick was the sole proprietor of ClubsAndGifts.com, a promotional website. At various times from April 4, 2009, through May 2014, Frederick, both in her own name and d/b/a ClubsAndGifts.com, purchased advertising on Facebook’s self-service advertising platform to promote ClubsAndGifts.com. Until no earlier than November 6, 2019, Frederick did not know, and could not reasonably have known, the truth about Facebook’s anticompetitive conduct, including its purpose and intent to engage in anticompetitive conduct, nor could she have known that she had been injured by paying supracompetitive prices for advertising.

26. Plaintiff Mark Young is a citizen of the State of New York. Young is the sole proprietor of Dinkum Hair, a hair salon located in Buchanan, New York. Young d/b/a Dinkum Hair purchased advertising on Facebook’s self-service advertising platform to promote the business between June 2017 and April 2019. Until no earlier than November 6, 2019, Young did not know, and could not reasonably have known, the truth about Facebook’s anticompetitive conduct, including its purpose and intent to

engage in anticompetitive conduct, nor could he have known that he had been injured by paying supracompetitive prices for advertising.

27. Plaintiff Joshua Jeon is a citizen of the State of Texas. He is a pastor at Dwell Church in Austin, Texas. In April 2016, Jeon purchased advertising on Facebook’s self-service advertising platform to promote Dwell Church. Jeon did not receive reimbursement from Dwell Church for the purchase. Until no earlier than November 6, 2019, Jeon did not know, and could not reasonably have known, the truth about Facebook’s anticompetitive conduct, including its purpose and intent to engage in anticompetitive conduct, nor could he have known that he had been injured by paying supracompetitive prices for advertising.

28. Plaintiff 406 Property Services, PLLC (“406 Property Services”) is a Montana professional limited liability company with its principal place of business in Whitefish, Montana. 406 Property Services is a real estate property services company. From approximately June 8, 2017, until approximately October 20, 2017, 406 Property Services purchased advertising on Facebook’s self-service advertising platform to promote its business. Until no earlier than November 6, 2019, 406 Property Services did not know, and could not reasonably have known, the truth about Facebook’s anticompetitive conduct, including its purpose and intent to engage in anticompetitive conduct, nor could it have known that it had been injured by paying supracompetitive prices for advertising.

29. Plaintiff Mark Berney is a citizen of the State of Montana. From in or about 2016 into December 2018, Berney purchased advertising on Facebook’s self-service advertising platform to promote his personal musical work. Until no earlier than November 6, 2019, Berney did not know, and could not reasonably have known, the truth about Facebook’s anticompetitive conduct, including its purpose and intent to engage in anticompetitive conduct, nor could he have known that he had been injured by paying supracompetitive prices for advertising.

30. Plaintiff Jessica Layser is a citizen of the Commonwealth of Pennsylvania. From approximately June 2016 through approximately July 2020, Layser purchased advertising on Facebook’s self-service advertising platform to promote her real estate business. She paid personally and was not reimbursed. Until no earlier than November 6, 2019, Layser did not know, and could not reasonably have

known, the truth about Facebook's anticompetitive conduct, including its purpose and intent to engage in anticompetitive conduct, nor could she have known that she had been injured by paying supracompetitive prices for advertising.

31. Plaintiff Katherine Looper is a citizen of the State of California. From in or about 2013 through March 2020, Looper purchased advertising on Facebook's self-service advertising platform to promote free musical concerts at the Cadillac Hotel, a residential hotel for low-income persons in San Francisco operated by Looper's nonprofit organization, Reality House West. Until no earlier than November 6, 2019, Looper did not know, and could not reasonably have known, the truth about Facebook's anticompetitive conduct, including its purpose and intent to engage in anticompetitive conduct, nor could she have known that she had been injured by paying supracompetitive prices for advertising.

32. Plaintiff Zahara Mossman is a citizen of the State of Florida. From in or about 2010 through 2020, Mossman purchased advertising on Facebook's self-service advertising platform to promote her real estate and marketing businesses. Until no earlier than November 6, 2019, Mossman did not know, and could not reasonably have known, the truth about Facebook's anticompetitive conduct, including its purpose and intent to engage in anticompetitive conduct, nor could she have known that she had been injured by paying supracompetitive prices for advertising.

33. Plaintiffs all paid prices for advertising that were higher than they would have been absent Facebook's anticompetitive conduct and unlawfully acquired and/or maintained monopoly. Facebook caused Plaintiffs to pay supracompetitive prices for advertising as a result of the market power it obtained and/or maintained as a result of the anticompetitive scheme described in this Complaint.

II. DEFENDANT

34. Defendant Facebook, Inc., is a publicly traded company, incorporated in Delaware. Facebook's principal place of business and headquarters is located at 1601 Willow Road in Menlo Park, California.

35. Founded in 2004 by Mark Zuckerberg, Facebook is a social media company that provides online services to billions of users around the world. In exchange for providing services, Facebook

collects user data, which it uses to create and sell targeted advertising services. Facebook's principal revenue is from targeted social media advertising that it provides to advertisers as a data broker.

36. Facebook also operates as a platform for third-party applications and hardware, and owns and operates several business divisions:

- Facebook. Facebook's core application, which bears the company's name, is, according to Facebook's filing with shareholders, designed to enable "people to connect, share, discover, and communicate with each other on mobile devices and personal computers." The Facebook core product contains a "News Feed" that displays an algorithmically ranked series of stories and advertisements individualized for each person.
- Instagram. Instagram is a photo-sharing application that allows users to share photos, videos, and messages on mobile devices. Instagram was acquired in April 2012, and at present, Facebook operates Instagram as a separate application from its core Facebook product.
- Messenger. Facebook's Messenger application is a multimedia messaging application, allowing messages that include photos and videos to be sent from person to person across platforms and devices.
- WhatsApp. WhatsApp is a secure messaging application used by individuals and businesses. WhatsApp was acquired by Facebook in 2014 for \$21.8 billion, and at the time had approximately 450 million users worldwide.
- Oculus. Oculus is Facebook's virtual reality hardware line of business, which Facebook acquired in March 2014 for approximately \$2 billion.

37. Facebook's revenue as of year-end 2019 was \$70.70 billion (up 27% from the previous year), with net income from operations of \$23.99 billion. Almost all of this revenue came from advertising, particularly mobile advertising. As of year-end 2019, Facebook maintained \$54.86 billion in cash and cash-equivalent securities. Facebook employed 44,942 people around the world at the end of 2019 (up 26% from the previous year). Facebook's revenue as of year-end 2020 was \$85.97 billion (a 22% increase from the previous year), with net income from operations of \$32.67 billion. Again, almost

1 all of that revenue came from mobile advertising. As of year-end 2020, Facebook maintained \$61.95
 2 billion in cash and cash-equivalent securities. Facebook employed 58,604 people at the end of the world
 3 at the end of 2020 (up 30% from the previous year).

4 38. For the 2019 fiscal year, Facebook reported to investors that on average it had 1.66 billion
 5 daily active users of Facebook and Messenger (“DAUs”) (up 9% from the previous year) and 2.50 billion
 6 monthly active users (“MAUs”) (up 8% from the previous year). Facebook also reported that on average
 7 it had 2.26 billion daily active people (“DAP”) who used any Facebook product (up 11% from the
 8 previous year) and 2.89 billion monthly active people (“MAP”) (up 9% from the previous year). For the
 9 2020 fiscal year, Facebook reported to investors that on average it had 1.84 billion DAUs (up 11% from
 10 the previous year) and 2.80 billion MAUs (up 12% from the previous year. Facebook also reported that
 11 on average it had 2.60 billion DAP who used any Facebook product (up 15% from the previous year).

12 JURISDICTION AND VENUE

13 39. This action arises under Sections 1 and 2 of the Sherman Antitrust Act (15 U.S.C. §§ 1,
 14 2) and Sections 4 and 16 of the Clayton Act (15 U.S.C. §§ 15, 26). The action seeks to recover treble
 15 damages, interest, costs of suit, equitable relief, and reasonable attorneys’ fees for damages to Plaintiffs
 16 and members of the Classes resulting from Defendant’s restraints of trade and monopolization of the
 17 Social Advertising Market described herein.

18 40. This Court has subject matter jurisdiction under 28 U.S.C. §§ 1331 (federal question),
 19 1332 (class action diversity jurisdiction), and 1337(a) (antitrust); and under 15 U.S.C. § 15 (antitrust).

20 41. Venue is appropriate in this district under 15 U.S.C. § 15(a) (Clayton Act), 15 U.S.C. § 22
 21 (nationwide venue for antitrust matters), and 28 U.S.C. § 1391(b) (general venue provision). Facebook
 22 transacts business within this district, and it transacts its affairs and carries out interstate trade and
 23 commerce, in substantial part, in this district.

24 42. The Court has personal jurisdiction over Facebook as it is subject to general jurisdiction
 25 in the State of California, where it maintains its headquarters and its principal place of business. The
 26 scheme, conspiracy, and monopolization alleged in this Complaint was targeted at individuals throughout
 27 the United States, causing injury to persons in the United States, including in this district.

INTRADISTRICT ASSIGNMENT

43. This action is properly assigned to the San Jose Division of this District, pursuant to Civil Local Rule 3-2(c) and (e), because Facebook is headquartered in San Mateo County (which is served by the San Jose Division), and a substantial part of the events or omissions that give rise to the claims occurred there.

FACTS

I. FACEBOOK EMERGES AS THE DOMINANT SOCIAL NETWORK

A. The Last Social Network Standing

44. Facebook’s meteoric rise since its founding in 2004 is well documented. The company—started in the dorm room of its CEO Mark Zuckerberg as “the facebook”—rose to prominence in the face of fierce competition from several social networks. Initially an exclusive service for elite universities throughout the United States, Facebook eventually expanded its network to encompass a general audience of users throughout the United States and worldwide.

45. Between 2004 and 2010, Facebook vanquished a number of rivals, emerging as the dominant social network in the United States.

46. Facebook’s first chief competitor was MySpace. Founded in 2003 (a year before Facebook), MySpace targeted the same audience, provided largely the same services, and rapidly attracted an enormous number of users. By 2005, MySpace had 25 million active users, and was acquired by NewsCorp for \$580 million. In 2006, MySpace registered 100 million users, passing Google as the most visited website in the United States.

47. However, the next three years featured a steady downward spiral for MySpace—and countervailing growth by Facebook. In 2008, Facebook passed MySpace in worldwide active users and continued to grow, reaching 307 million active users across the globe by April 2009. In May 2009, Facebook passed MySpace in United States, 70.28 million to 70.26 million monthly active users.

48. MySpace never came close to Facebook again. By 2010, MySpace had mostly exited the market, leaving the business of social media for good. MySpace’s CEO capitulated in November of 2010: “MySpace is not a social network anymore. It is now a social entertainment destination.” In September

2010, MySpace reported that it had lost \$126 million, and in June 2011, NewsCorp sold the company for \$35 million—\$545 million less than it had paid just six years earlier. By then, its user base had dwindled to just 3 million monthly visitors.

49. During the same time period, several other social networks also met their demise, including Google's Orkut, AOL's Bebo, and Friendster, which failed to scale rapidly enough to compete with MySpace and Facebook.

50. By 2009 and through 2010, Facebook emerged as the only peer-to-peer social media network to exist at scale, and no other network or company rivaled Facebook's massive user base. On March 2, 2010, *Adweek* reported that Facebook had booked revenues of up to \$700 million in 2009 and was on track for \$1.1 billion in 2010—almost all from advertising to its newly won users. Facebook had been roughly doubling its revenues every year up until that point—\$150 million in 2007, \$280-300 million in 2008, and \$700 million in 2009.

51. *Time* magazine heralded Zuckerberg as its 2010 Person of the Year.



52. *Time*'s cover story set out the stakes—the scope of the newly assembled social network was unprecedented and staggering:

1 What just happened? In less than seven years, Zuckerberg wired together a
 2 twelfth of humanity into a single network, thereby creating a social entity
 3 almost twice as large as the U.S. If Facebook were a country it would be
 4 the third largest, behind only China and India. It started out as a lark, a
 5 diversion, but it has turned into something real, something that has changed
 6 the way human beings relate to one another on a species-wide scale. We
 7 are now running our social lives through a for-profit network that, on paper
 8 at least, has made Zuckerberg a billionaire six times over.

9 53. By 2010, Facebook was unrivaled and dominant in a way no company since Microsoft
 10 had been in post-personal-computer history. And it had done so by riding the currents of powerful
 11 network effects.

12 **B. A New Market of Its Own Creation**

13 54. By the beginning of the millennium's second decade, Facebook was the indisputable king
 14 of an entirely new market—a market built not on hardware or operating system dominance, but one built
 15 on a network of people, with its power and value directly derived from their engagement with that
 16 network. The more data users fed into Facebook by communicating and interacting with each other,
 17 posting their pictures, and publishing their content, the more valuable the Facebook network became to
 18 third parties, who could advertise to Facebook's users by targeting them using the very information they
 19 provided to Facebook's network.

20 55. Data about what information users shared on their personal pages; the photos and profiles
 21 they viewed; their connections to others; what they shared with others; and even what they put in
 22 messages to other users all allowed targeted advertising on a scale that had never before existed. Unlike
 23 search advertising, Facebook's advertising platform allowed advertisers to target Facebook's user base
 24 by their attributes and behavior, not by a query entered into a search box. More importantly, unlike in
 25 search, user identity was not only discoverable, it was willingly provided by users—as was the identity
 26 of those users' closest friends and family members. These identities could be tracked and targeted
 27 throughout the Internet.

28 56. This social data created by Facebook's network of engaged users could be monetized in a
 number of ways. The data could be resold for targeted advertising and machine learning; Facebook's
 machine learning algorithms mined patterns in the data for advertisers, which allowed advertisers to reach

1 precisely the right audience to convert into sales, user sign-ups, or the generation of sales leads. The data
2 also could be sold by commercializing access—for example, by providing application developers, content
3 generators, and advertisers with direct access to the information embedded in Facebook’s network, such
4 as the interconnection between users, user attributes, and user behavior. That data then could be mined
5 by these third parties.

6 57. All the methods of monetizing social data were based on selling that data, but such data
7 could be packaged, structured, or mined differently depending on the application for which it was being
8 sold. For advertisers, Facebook’s network presented advertisers and Facebook itself with entirely new
9 social signals, such as relationships, events, friendships, and granular interests. Movies, music, and books
10 were inherent parts of a user’s profile. The amount of information in Facebook’s network that could be
11 mined as social data was unprecedented—and Facebook received all that data daily from its millions of
12 users in the United States and worldwide.

13 58. The data Facebook collected was uniquely social, derived from the engaged interactions
14 and strong identity of Facebook’s users. Twitter, a public-facing social network, loosely enforced identity
15 and never required users to disclose granular details about themselves. Facebook stood alone in this
16 regard, with a clear product emphasis on individuals and their connections to others. In 2010, Google,
17 Yahoo, and the other major online advertising sources competed in an entirely different market—one
18 based on search data. The data Facebook had at its disposal was not fungible with search data—it was
19 actionable data about individual users, with their identities fully ascertainable.

20 59. By 2010, Facebook stood alone as the dominant player in the newly emergent market for
21 social advertising—a market in which Facebook’s own users provided Facebook with a constant stream
22 of uniquely valuable information, which Facebook in turn monetized through the sale of advertising.
23 Advertisers, finding no substitute from any other company, paid top dollar for Facebook’s powerful
24 targeting and actionable data, and some of those advertisers—wittingly or not—even fed crucial data
25 about themselves, their products, and the efficacy of their targeting back to Facebook’s network.

26 60. As Facebook itself explained to third-party developers in May 2007, Facebook’s core
27 value proposition and business model was (a) “providing access to a new kind of data—social data, which
28

enables you to build applications that are relevant to users.” With respect to that data, Facebook told developers: “You are on a level playing field with us. You can build robust apps, not just widgets. Complete integration into the Facebook site.” By 2010, it was clear that Facebook’s entire business was selling this new form of “social data” (and machine-learning-driven user targeting based on that data) and that it would do so by selling access to developers and selling advertisements targeting Facebook’s network of engaged and active users.

C. The Data Targeting Barrier to Entry

61. As Facebook’s dominant position emerged in 2010, powerful network effects and feedback loops took hold and solidified that position. Data provided by users, and user targeting based on that data, made Facebook’s network more valuable, thereby attracting more users to the network. As a typical use case, a Facebook user would invite his closest friends and family, who would then invite and engage with other friends and family members who existed on the network. A familiar feedback loop—a virtuous circle—emerged, rapidly growing Facebook’s user base.

62. The content generated by this user base, in turn, increased the value of the Facebook network. With each photograph, relationship status, check-in, or post by a Facebook user, the Facebook network became more valuable, not just as a means of communicating with directly connected acquaintances, but as a means of learning about more remotely connected ones.

63. As Samuel Lessin, then Facebook’s VP of Product Management, explained to Mark Zuckerberg in an internal email on October 26, 2012, the data Facebook collects makes Facebook progressively more proficient at collecting and monetizing data:

One of the things that puts us currently in a very defensible place is the relationship we have created between the people using Facebook all the time, and us having the information we need to make Facebook a better product. This is the fundamental insight in something like coefficient. *We know more about what people want to see because people look at more stuff on our platform.* In this respect, while there are other ways to get close, it feels viscerally correct that there is an ROS dynamic at play, *the more people that use the system, the more information we have on how to make more people use the system.*

(emphasis added).

64. A barrier to entry emerged from this feedback loop. To compete with Facebook, a new entrant would have to rapidly replicate both the breadth and value of the Facebook network—a task a mere clone of that network could not accomplish. Indeed, to compete with Facebook, a competitor would not only have to build its own vast network but would have to draw active social engagement on a massive scale—which likely would require drawing a vast quantity of Facebook users away from that platform.

65. The costs to switch would be massive: an entrant-competitor would have to present an overall value proposition to users that not only exceeded that of Facebook’s entrenched network, but did so handily. Moreover, to compete with Facebook’s virtuous circle, the value delivered by an entrant-competitor platform would have to facilitate social data mining, including through machine learning and artificial intelligence, that would create even more value for users, developers, and advertisers. This barrier to entry is referred to throughout this Complaint as the Data Targeting Barrier to Entry (“DTBE”).

66. The DTBE protects Facebook’s ability to control and increase prices in the Social Advertising Market without the pressures of price competition from existing competitors or new entrants. Because of its monopoly power in the Social Advertising Market and the DTBE, Facebook has been able to consistently increase the price it charges for social advertising. And this is exactly what Facebook has done since it obtained its dominant position in 2010.

67. From 2011 to 2012, for example, Facebook massively increased the prices it charged for its advertisements—one of the primary sales channels for its social data. That year, costs per thousand impressions (CPM) on Facebook increased by 41%, with a 15% increase in the last quarter of 2011 alone. Cost per click (CPC), which is a measure of advertising costs paid on a by-click basis, rose 23% that same year. Facebook increased prices for social advertising as it also grew the number of advertisements it displayed on its site, indicating monopoly power in the Social Advertising Market.

68. Facebook maintained that power over its prices through 2013, with a 2.9x increase in CPMs year over year. The increase came as overall advertising revenues increased yet again—that year by a staggering 83% over the last.

Figure 1: Retail Facebook CPM, Q4 2012 – Q4 2013



69. These price increases would not be possible without the DTBE. If a rival network existed with comparable social data available for sale through advertising, Facebook's price increases would have been met with customer migration to the comparable rival. But Facebook had no such rival and was unfettered in its ability to increase prices, even while rapidly increasing its supply of data for sale through advertisement.

70. Once Facebook had achieved dominance in the Social Advertising Market, its position only improved—and became more entrenched. The more advertising Facebook sold, and the more social data Facebook collected and packaged for sale, the more effective Facebook became at selling advertising, targeting users, and commercializing direct access to its users' social data (e.g., through APIs). This, in turn, made entry by a new rival impossible or prohibitively costly, thereby allowing Facebook to increase prices and make additional investments that deepened the DTBE moat surrounding its business.

D. Google's Failed Entry into the Social Advertising Market

71. In 2010, Google became desperate to enter the Social Advertising Market. It had tried several times to do so before, but each foray was met with failure. Google's Orkut social network, which was launched days before Facebook, was quickly overtaken. Wave, Google's social communication

1 platform, never achieved any traction with users. And Google's Buzz social network—built on the back
2 of its highly successful Gmail product—imploded quickly in early 2010.

3 72. Google's next attempt to enter the market attacked Facebook's functionality head-on,
4 which meant attempting to penetrate the powerful DTBE protecting Facebook's business. Google made
5 a massive, unprecedented investment of resources into building a product with enough value to lure users
6 away from Facebook's broad, highly engaged social network.

7 73. In 2010, Google's Vic Gundotra became the company's Chief Architect. Gundotra pitched
8 a new social network to Larry Page, Google's cofounder, who returned as CEO of the company in 2011.
9 Gundotra repeated an ominous refrain, "Facebook is going to kill us. Facebook is going to kill us," which
10 frightened Page into action.

11 74. Page greenlit a new product, Google+. Initially, Google+ sought to leverage Google's
12 YouTube product to build its social network, requiring a Google+ account for access to certain key
13 features of YouTube. In the face of significant user resistance, Google backed away from that
14 requirement. Nonetheless, Google attempted, through Google+, to build out a "social graph" that would
15 leverage a common user identity across Google products, including YouTube and Gmail.

16 75. In early 2011, Google began what insiders now refer to as "the 100-day march" toward
17 launch of Google+. The product Google planned to deliver was, by any fair account, uncannily similar to
18 what Facebook offered in terms of product features and functionality. By the summer of 2011, the planned
19 features for Google+ included a continuous scroll product called the "stream" (a clone of Facebook's
20 "feed" product); a companion feature called "sparks," which related the "stream" to users' individual
21 interests; and a sharing app called "Circles," a purportedly improved way to share information with one's
22 friends, family, contacts, and the public at large.

23 76. Unlike Google's past products, Google+ was not designed to organically grow and scale
24 from small beginnings. From the outset, Google invested massive amounts of resources to bring a
25 finished, full-scale social network to market. Calling the project "Emerald Sea," Google conscripted
26 almost all of the company's products to help build Google+. Hundreds of engineers were involved in the
27 effort, which remained a flagship project for Page, who had recently reassumed the Google CEO role.
28

1 Google's Gundotra was quoted explaining that the product that would become Google+ was a
2 transformation of Google itself: "We're transforming Google itself into a social destination at a level and
3 scale that we've never attempted—orders of magnitude more investment, in terms of people, than any
4 previous project."

5 77. The amount of resources Google brought to bear stood in stark contrast to its previous
6 attempts at penetrating the Social Advertising Market. Google had dedicated barely a dozen staff
7 members to its previous failed social network product, Buzz. At its peak, Google+ involved 1,000
8 employees from divisions across the country. Google, for example, ripped out its elaborate internal video
9 conferencing system and forced employees to use the Google+ Hangouts video chat feature, which one
10 internal employee described as "janky." Employee bonuses were tied to the success of Google+. And the
11 entire project was confined to a level of secrecy never before seen at Google.

12 78. Google+ was released on June 28, 2011. The product included the "stream," the "Circles"
13 app, the "Hangout" video chat and messaging product, and a photo sharing product. The resemblance to
14 Facebook was striking. As one internal Google employee commented: "this looks just like Facebook.
15 What was the big deal? It's just a social network." Another Google employee was quoted as saying, "All
16 this fanfare and then we developed something that in the end was quite ordinary." One thing was
17 indisputable: with the release of Google+, Google had challenged Facebook head-on by effectively
18 cloning Facebook's product.

19 79. Because Google's user base was already massive, the Google+ product attracted millions
20 of users shortly after launch. But though these users signed up for Google+, Google quickly found out
21 they were not using the product. As one former Google employee explained:

22 It was clear if you looked at the per user metrics, people weren't posting,
23 weren't returning and weren't really engaging with the product. Six months
24 in, there started to be a feeling that this isn't really working.

25 80. The problem for Google+ was the powerful network effect that reinforced the DTBE that
26 protected Facebook. Google's clone of Facebook did not present enough new value to overcome massive
27
28

network-based switching costs—the cost to Facebook users of shifting away from an existing networked product in which the users had actively invested their social data for years.

81. Paul Adams, a former Google+ user-experience team member, summed it up succinctly when asked why Google+ had failed:

What people failed to understand was Facebook and network effects. . . . It's like you have this grungy night club and people are having a good time and you build something next door that's shiny and new, and technically better in some ways, but who wants to leave? People didn't need another version of Facebook.

82. By 2014, Google+ was declared a failure and Gundotra, its founder, eventually left Google. Within just a few years, Google—with all of its resources, developers, and existing user base—failed entirely to overcome the DTBE protecting Facebook. As long as Facebook controlled the data derived from an engaged and active user base, it could continue to keep that user base active and engaged.

83. The only way to disrupt this virtuous circle was with a rival product that provided significantly more or different value than Facebook, and that itself was propelled to scale by powerful network effects.

II. A THREAT TO FACEBOOK'S MONOPOLY: THE RISE OF SMARTPHONES AND MOBILE APPS

A. The Mobile App Revolution

84. In 2009 and 2010, as Facebook emerged the undisputed winner of the social media wars, another new market had begun to take hold. The launch of the Apple iPhone in 2007 created a market for a new type of cellular phone: one with a user interface capable of robust Internet connectivity and messaging. No longer constrained by numeric keypads for texting—or clunky, permanent alphanumeric keyboards attached to phones, such as with the Treo or Sidekick cellular phones—the iPhone dynamically displayed a multi-touch keyboard and came equipped with a full-featured web browser that rendered complete web pages.

85. By the summer of 2008, Apple's newest iPhone, the iPhone 3G, was released with onboard GPS and other hardware upgrades. Accompanying the release of the new iPhone was a new store for

third-party applications that would run natively on the iPhone: the Apple App Store, which opened for business on July 10, 2008, the day before the release of the iPhone 3G.

86. Developers who launched their third-party applications via the App Store reaped huge rewards. There were approximately 500 apps available at the App Store's initial launch. Games using the iPhones accelerometer became immediate successes, some quickly earning hundreds of thousands of dollars by selling downloads for just a few dollars each. Applications that exploited the new GPS functionality in the iPhone also quickly became popular. By September 2008, the Apple App Store had racked up 100 million downloads, and by 2009, it hit 1 billion. iPhone apps had become a new means to deliver scaled value to countless users. Google also launched what became its Play Store (initially known as Android Market) in 2008. It soon overtook Apple's App Store in terms of overall volume, with 82% growth. The mobile app revolution had begun.

87. Mobile apps rapidly proliferated, with huge opportunities for further growth—as the lion's share of cell phone activity by 2010 had become something other than making phone calls. For example, a 2010 Pew Research survey showed that taking pictures and sending text messages had become the most common uses for cellular phones among adults, with more than a third of adult cell phone users accessing the Internet, playing games, emailing, recording video, or playing music through their cell phones. At the same time, 29% of adult cell phone users had used a downloaded app.

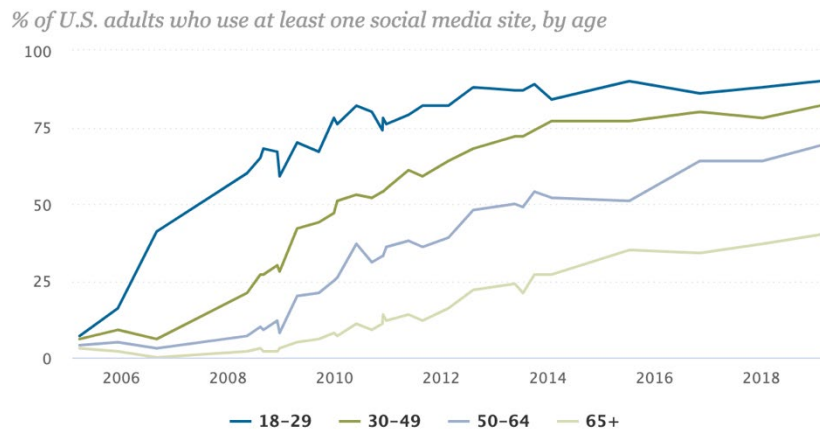
% of adult cell phone users who do each of the following on their phone...

Take a picture	76%
Send or receive text messages	72
Access the internet	38
Play a game	34
Send or receive email	34
Record a video	34
Play music	33
Send or receive instant messages	30
Use an app	29

Source: Pew Research Center's Internet & American Life Project, April 29-May 30, 2010 Tracking Survey. N=1,917 adult cell phone users.

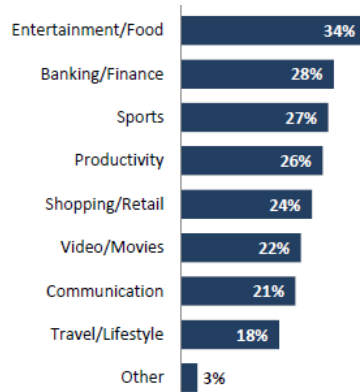
88. A 2010 Nielsen survey showed that games, news/weather, maps and navigation, and social networking were the most popular apps on cellular phones.

89. Notably, mobile apps resonated most strongly with the demographics that had recently adopted social media and were providing their data to Facebook in droves. App users among cell phone owners were disproportionately younger, with 44% of app users in 2010 under the age of 20 and another 41% between the ages of 30 and 49. These were the same demographics that were rapidly adopting social media as part of their lives and providing Facebook with the social data that built and maintained the DTBE that protected its business.



Source: Surveys conducted 2005-2019.

PEW RESEARCH CENTER



Source: The Nielsen App Playbook, December 2009. N=3,962 adults who have downloaded an app in the 30 days prior to the survey.

90. Many of the mobile apps that were rapidly attracting users were doing so because they presented their own specialized value propositions. These apps had to be specialized because cellular

1 phone screens were smaller, particularly in 2010, and mobile traffic was driven by specialty software,
 2 often designed for a single purpose. Users signed up for these apps with their e-mail addresses and
 3 personal information and interacted directly with the apps.

4 91. As *Wired* magazine described in 2010, a typical user moved from app to app, each with
 5 some specialized use:

6 You wake up and check your email on your bedside iPad—that’s one app.
 7 During breakfast you browse Facebook, Twitter, and the New York
 8 Times—three more apps. On the way to the office you listen to a podcast
 9 on your smartphone. Another app. At work, you scroll through RSS feeds
 10 in a reader and have Skype and IM conversations. More apps. At the end
 of the day, you come home, make dinner while listening to Pandora, play
 some games on Xbox Live, and watch a movie on Netflix’s streaming
 service.

11 92. In 2010, Morgan Stanley projected that within five years, the number of users who
 12 accessed the Internet from mobile devices would surpass the number who accessed it from PCs. The
 13 Internet was at an inflection point—the World Wide Web was no longer the dominant way to access
 14 information. Users were obtaining their information from specialized walled gardens, and Facebook’s
 15 own walled garden was one app away from being superseded.

16 93. The years leading up to 2010 saw the rise of streaming apps, such as Netflix and Pandora,
 17 and e-book readers, such as Kindle and iBooks. Apple’s 2010 list of top-grossing iPhone apps included
 18 mobile games such as Angry Birds, Doodle Jump, Skee-Ball, Bejeweled 2 + Blitz, Fruit Ninja, Cut the
 19 Rope, All-in-1 GameBox, the Moron Test, Plants vs. Zombies, and Pocket God. Facebook’s mobile app
 20 topped the list of free downloads in the App Store, along with Words with Friends, Skype, and the
 21 Weather Channel App.

22 **B. Facebook Recognizes the Looming Threat Presented by Mobile Applications**

23 94. By 2011, Facebook realized that it had fallen behind. Facebook had just debuted its new
 24 “Timeline” product, a controversial modification of the Facebook feed that generated dynamic content
 25 for each user rather than a static series of posts visible to the user. Facebook had spent the last eight
 26
 27
 28

1 months prioritizing its desktop experience and its new Timeline product. But while it did so, mobile
2 applications continued their meteoric rise.

3 95. Facebook's own mobile application was built on a technology called HTML5, which at
4 the time was good for building web pages but not for building mobile apps native to iOS and Android
5 smartphones. As a result, Facebook's mobile app was buggy, prone to crashes, and painfully slow. As
6 Zuckerberg would lament years later about HTML5, "We took a bad bet."

7 96. Zuckerberg reflected in 2018 that Facebook had fallen behind when mobile apps emerged:

8 One of my great regrets in how we've run the company so far is I feel like
9 we didn't get to shape the way that mobile platforms developed as much as
10 would be good, because they were developed contemporaneously with
11 Facebook early on. I mean, iOS and Android, they came out around 2007,
we were a really small company at that point—so that just wasn't a thing
that we were working on.

12 97. As mobile apps rose, Facebook's desktop product acquired users at a slower pace. All of
13 this occurred as Facebook was planning its initial public offering. Facebook knew that its position was
14 eroding and that if mobile growth continued, its IPO debut would be in the midst of material changes to
15 its business, undermining Facebook's financial and qualitative disclosures to public investors.

16 98. But there was no avoiding the issue. Facebook held its IPO on May 18, 2012. By the time
17 Facebook released its first annual report, the trend was unmistakable—the transition to mobile devices
18 from desktop web-based applications posed an existential threat to Facebook's business. In its 2012 Form
19 10-K, Facebook disclosed this risk to shareholders as one of the factors that affected its bottom line:

20 ***Growth in the use of Facebook through our mobile products as a***
21 ***substitute for use on personal computers may negatively affect our***
22 ***revenue and financial results.***

23 We had 680 million mobile MAUs in December 2012. While most of our
24 mobile users also access Facebook through personal computers, we
25 anticipate that the rate of growth in mobile usage will exceed the growth in
26 usage through personal computers for the foreseeable future and that the
27 usage through personal computers may decline or continue to decline in
28 certain markets, in part due to our focus on developing mobile products to
encourage mobile usage of Facebook. For example, during the fourth
quarter of 2012, the number of daily active users (DAUs) using personal
computers declined modestly compared to the third quarter of 2012,

including declines in key markets such as the United States, while mobile DAUs continued to increase. While we began showing ads in users' mobile News Feeds in early 2012, we have generated only a small portion of our revenue from the use of Facebook mobile products to date. In addition, we do not currently offer our Payments infrastructure to applications on mobile devices. If users increasingly access Facebook mobile products as a substitute for access through personal computers, and if we are unable to continue to grow mobile revenues, or if we incur excessive expenses in this effort, our financial performance and ability to grow revenue would be negatively affected.

C. The Facebook Platform

99. Although Facebook faced a looming threat from mobile applications, it maintained an important source of leverage: its social data. Facebook possessed (and continued to receive) vast quantities of information about its massive user base, including how each user was connected to others. This information was valuable to both new and existing mobile applications, which could leverage Facebook's social data to obtain new users and to build novel social features, functions, and apps.

100. Facebook referred to its network as its "Graph," coined after a mathematical construct that models connections between individual nodes. The Facebook Graph contained user "nodes," with connections and information exchanged among nodes as "edges." Facebook coined the term "Open Graph" to describe a set of tools developers could use to traverse Facebook's network of users, including the social data that resulted from user engagement.

101. Importantly, Open Graph contained a set of application programming interfaces ("APIs") that allowed those creating their own social applications to query the Facebook network for information. As Facebook explained in its 2012 Form 10-K:

Open Graph. Our underlying Platform is a set of APIs that developers can use to build apps and websites that enable users to share their activities with friends on Facebook. As Open Graph connected apps and websites become an important part of how users express themselves, activities such as the books people are reading, the movies people want to watch and the songs they are listening to are more prominently displayed throughout Facebook's Timeline and News Feed. This enables developer apps and websites to become a key part of the Facebook experience for users and can increase growth and engagement for developers.

102. Open Graph, along with other Facebook products, such as its NEKO advertising and Payments products, comprised Facebook's Platform. The Platform was vital to Facebook's business because it ensured that engagement continued on Facebook. Without the Platform, Facebook would be required to build applications that increased the value of its network itself—meaning that Facebook would have to try to predict what applications users wanted; design, code, and scale those applications across its user base and network; and bear the risk and resource drain of guessing wrong and making mistakes.

103. Facebook did not have the resources to do this, so it decided instead to allow third parties to build applications for the Platform. As Mark Zuckerberg observed in a February 2008 email to Facebook's VP Engineering for Platform Michael Vernal, a senior Zuckerberg lieutenant who was in part responsible for creating Open Graph:

Platform is a key to our strategy because we believe that there will be a lot of different social applications And we believe we can't develop all of them ourselves. Therefore It's important for us to focus on it because the company that defines this social platform will be in the best position to offer the most good ways for people to communicate and succeed in the long term.

104. Put simply, Facebook could either speculate on new social applications by building them itself or it could provide a platform for others to do so. For years, Facebook opted to provide a platform until it was able to develop its own social applications.

105. But Facebook also recognized that developers on its Platform could potentially pose a competitive threat. In its 2012 annual report, Facebook disclosed the following significant risk factor to its operations:

In addition, Platform partners may use information shared by our users through the Facebook Platform in order to develop products or features that compete with us. . . . As a result, our competitors may acquire and engage users at the expense of the growth or engagement of our user base, which may negatively affect our business and financial results.

106. Thus, Facebook knew that competition could come from its own third-party application developers. But Facebook nevertheless actively sought developers to build applications on its Platform

1 because of the potential to extract profits from the applications these developers built and the users they
2 attracted to, and engaged on, Facebook's network.

3 107. As Facebook explained to its investors in 2012, maintaining a Platform on which
4 developers could build applications meant more engagement and therefore greater ad revenues for
5 Facebook:

6 Engagement with our Platform developers' apps and websites can create
7 value for Facebook in multiple ways: our Platform supports our advertising
8 business because apps on Facebook create engagement that enables us to
9 show ads; our Platform developers may purchase advertising on Facebook
10 to drive traffic to their apps and websites; Platform developers use our
11 Payment infrastructure to facilitate transactions with users on personal
12 computers; Platform apps share content with Facebook that makes our
13 products more engaging; and engagement with Platform apps and websites
contributes to our understanding of people's interests and preferences,
improving our ability to personalize content. We continue to invest in tools
and APIs that enhance the ability of Platform developers to deliver
products that are more social and personalized and better engaged people
on Facebook, on mobile devices and across the web.

14 108. Facebook's Platform was valuable to Facebook in several important ways.

15 109. First, the Platform meant that new applications would be built on Facebook's network,
16 increasing the value of Facebook's network as the applications became more popular. The increased
17 engagement with Facebook as a result of these new applications translated to better-targeted content and
18 higher advertising revenues.

19 110. Second, Facebook would not need to spend significant resources to develop new
20 applications or test new business models—third parties would do that instead. Facebook could merely
21 wait for an application built for its Platform to gain widespread adoption, then either build a competing
22 application or passively glean the benefits of that popular application's user engagement, including
23 valuable new social data for Facebook and its network.

24 111. Third, access to Facebook's network was itself valuable to third-party developers, so
25 Facebook could charge developers—most notably, through API access and advertising purchases—to
26 access Facebook's Platform and the social data it collected from Facebook's massive number of engaged
27 users.
28

D. The Profitable Open Graph Platform and Mobile Install Business

112. Facebook continued to struggle to catch up with the new onslaught of mobile applications, but it recognized that the new apps required aggressive user growth to be profitable. Among other things, Facebook's APIs allowed mobile app developers to query the friends of a person's friends, which allowed mobile applications to find other users who might be interested in using their apps.

113. Mobile apps also could use Facebook to communicate across Facebook's network, either directly with a user's friends or with others not directly connected with the user. A mobile payment application, for example, could enable two strangers to pay each other, even if they were not directly connected on Facebook—so long as both of them existed somewhere on Facebook's Platform. A user of a dating application, such as Tinder, could use Facebook's APIs to find a compatible date, either in the extended network of one's friends or beyond—anywhere on Facebook's Platform.

114. Facebook quickly realized it could monetize the value of its network through third-party mobile applications, and it moved aggressively to do so, beginning with games built to run on Facebook's Platform. Those games, many of which were social games that allowed users to play with and against each other, sought above all else new users to increase their adoption. Facebook's Vernal sought to obtain a beachhead with these applications, monetizing each additional game install that resulted from the use of Facebook's Platform or from Facebook's advertising product, NEKO.

115. For example, Facebook included ads as "stories" on user timelines that indicated whether the user knew other users who were playing a particular game. Facebook then monetized such advertisements when the game obtained new users from them. As Vernal explained in a May 2012 e-mail:

The biggest/most efficient market segment for advertising on mobile today is driving app installs. This is at least partly because it's the most measurable—if you know that you get \$0.70 from every game you sell, then in theory you can afford to pay up to \$0.69/install. This kind of measurability allows for maximal bidding.

So, what we're trying to do is kickstart our sponsored stories business on mobile by focusing on one particular type of story (is-playing stories) and one market segment (games), make that work really well, and then expand from there.

116. Facebook thus leveraged its most valuable asset—the information it had about its users, their interests, and most importantly, their friends—to make money from the proliferation of mobile games.

117. Games like Farmville, a mobile application that allowed players to create their own simulated farms, quickly took off because of Facebook’s Platform. Facebook increasingly recognized that it could obtain engagement from users through the game itself.

118. This strategy led to a broader one, in which Facebook drove app installs by allowing developers to advertise to its user base and traverse Facebook’s social network through the Facebook APIs. Facebook collected a fee for each app install that resulted from its network. Vernal outlined the plan in detail:

Roughly, the plan:

1/ Create new iOS + Android SDKs, because the current ones are terrible. Ship Thunderhill so we get even broader adoption of our stuff.

2/ Wire them up to make sure we know when you’re playing a game (so we can generate the same kind of is-playing stories we can on canvas).

3/ Generate a bunch of effective, organic distribution for these games via our existing channels (news feed, net ego on both desktop + mobile). Ship send-to-mobile, which allows us to leverage our desktop audience to drive mobile app traffic.

4/ Create an even better app store than the native app stores (our app center) and make a lot of noise about it, so developers know that they should be thinking about us to get traffic to their mobile apps.

5/ Introduce a paid offering, probably cost-per-install (CPI) based, where you can pay us to get installs from your mobile app. Primary channels for this paid distribution are News Feed and App Center (on desktop + mobile) as well as RHC on desktop.

119. The strategy was clear, not just for gaming, but for mobile apps. Facebook would make money by allowing app developers to leverage its user base. Facebook would advertise social games to its users by plumbing their social data—including data about when they played games and which of their friends played them—and in exchange, Facebook would receive some amount of money per install, which

would be the app developer's cost-per-install (CPI). The same plan would work for mobile applications generally.

120. By the end of 2011 and the beginning of 2012, Facebook began discussing other ways to monetize its Platform, including its Open Graph APIs. One way was to sell API access based on usage. Zuckerberg and top executives at Facebook extensively debated a tiered approach to API access. Facebook deliberated over a pricing model for API access, and internally decided that it would be possible to sell API access to third-party developers. Facebook also decided that it could bundle API access with the ability to advertise on Facebook. However, as explained below, Facebook gave up the profits it could glean from API access for the chance to dominate the Social Advertising Market entirely, excluding competitors (both actual and potential) and leveraging network effects to achieve and maintain monopoly power.

III. FACEBOOK WEAPONIZES ITS PLATFORM TO DESTROY COMPETITION

A. Facebook Makes Plans to Remove Vital Platform Functionality and Refuses to Sell Social Data to Competing Application Developers

121. Although Facebook had made significant amounts of revenue and profit selling access to its social data through its APIs and its NEKO advertising system and had planned to expand that business, it chose not to, sacrificing those significant profits.

122. By the end of 2011 and the beginning of 2012, Zuckerberg along with Facebook's Vice President of Growth, Javier Olivan, its VP of Product Management, Samuel Lessin, and Michael Vernal internally debated a plan to prevent third-party developers from building their own competing social networks that could be capable of generating engagement and social data independent of Facebook's Platform.

123. Emerging mobile applications such as Line, WeChat, and Instagram were creating their own vast user bases with identity and login features separate from the Facebook Platform. Their increasing ubiquity posed an existential threat to Facebook's core business, which relied heavily on engagement from its user base. These applications provided quintessentially social applications, such as

1 image sharing, messaging, and payments—a direct threat to Facebook’s own applications, including
2 Facebook’s own fledgling Messenger application.

3 124. Mobile applications were rapidly eating away at Facebook’s dominance, which relied
4 heavily on its web-based desktop product. Zuckerberg openly acknowledged that its desktop applications
5 were not the future and that native phone apps would dominate the mobile web in the future.

6 125. Zuckerberg therefore sought to consolidate core applications into its own centralized
7 Facebook application, noting in a March 2012 Q&A with employees that Facebook was “building
8 towards social Facebook versions where you can use the individual app or the Facebook version.” That
9 is, users could “replace whole parts of your phone with these Facebook apps and [they] will be a whole
10 package for people.”

11 126. Beginning in the fall of 2011 and well into 2012, Mark Zuckerberg and his chief
12 lieutenants, Lessin and Vernal, planned to address the looming mobile applications threat. Their solution
13 was a scheme to disrupt the massive growth of mobile applications by attracting third-party developers
14 to build for Facebook’s Platform and then remove their access to the APIs that were most central to their
15 applications. They would accomplish this by leveraging Facebook’s “Friends” and “Timeline” APIs, as
16 well as other vital APIs, including those relating to messaging.

17 127. The Friends APIs let third-party developers traverse the Facebook Graph, searching
18 through a user’s friends as well as the friends of their friends. Zuckerberg and his executives proposed
19 modifying the APIs to deny third-party developers access to information about a user’s friends (and the
20 friends of their friends) unless that developer’s application was already installed by a user’s friends to
21 begin with. This ensured that new applications could not obtain new users or use Facebook’s social data
22 to increase the value of their application.

23 128. Facebook also foreclosed developers from continuing to extract information about a user’s
24 friends from their timeline or news feed. Thus, third-party applications that relied on the stream of
25 information that flowed through a user’s news feed, such as a post about a friend of the user getting
26 engaged or sharing a news article, would be abruptly left with none of the social data they needed to
27 function.
28

1 129. Removing access to these APIs halted the growth of tens of thousands of third-party
2 applications that relied on these essential APIs and were, in Facebook’s view, threatening Facebook’s
3 dominance by eroding the DTBE that protected Facebook’s business.

4 130. Facebook’s plan prevented any competitive third-party application from buying social
5 data from Facebook, either through its Platform APIs or through its advertising Platform. As Vernal
6 explained to Lessin in August of 2012, Facebook would “not allow things which are at all competitive to
7 ‘buy’ this data from us.”

8 131. Facebook thus refused to sell its social data to any competitive third-party developer,
9 sacrificing significant short-term profits in exchange for a competitive advantage in the Social
10 Advertising Market. If not for the prospect of driving these competitors out of the markets in which
11 Facebook competed, the decision to refuse to sell social data to third-party developers made no economic,
12 technical, or business sense.

13 132. Third-party developers with successful applications increased the value of Facebook’s
14 overall network by increasing engagement and generating the very social data Facebook sold through its
15 targeted advertising channels, including to developers. As Zuckerberg had observed years earlier,
16 Facebook itself could not broadly develop new third-party apps or anticipate what apps would be
17 successful, so it relied on third parties to do so. Refusing API and social data access to third parties meant
18 that they could not develop the applications that were vital to Facebook’s growth, engagement, and
19 advertising revenue. Facebook decided to deliberately sacrifice the value its third-party developers
20 provided to secure dominance in the Social Advertising Market.

21 **B. Facebook’s Social-Data Heist**

22 133. In May 2012, Zuckerberg decided to use the threat of blacklisting from its Platform to
23 extract precious social data from some of Facebook’s competitors. He instructed his executives to quietly
24 require “reciprocity” from major competitors that used Facebook’s Platform. The reciprocity Zuckerberg
25 demanded was the very lifeblood of these competitors’ businesses—the social data harvested from user
26 engagement on their competing networks.

134. By the middle of 2012, Facebook began to block some of its competitors from using its Platform and thereby obtaining Facebook’s social data. Facebook had already blocked Google, including its competing social network Google+, from access to Facebook’s APIs and advertising platform. With respect to Twitter, Instagram, Pinterest, and Foursquare, Facebook would demand “reciprocity” or blacklist them. Reciprocity, of course, meant that these competing social networks would have to hand over their most valuable asset—their social data—to their rival Facebook.

135. If rivals did not comply with Zuckerberg’s demands to hand over their social data to Facebook, Facebook would simply take it. In May 2012, Vernal directed his subordinates, Douglas Purdy (Director of Engineering for Platform) and Justin Osofsky (VP of Global Operations), to build “our own hacky scraper” and a “bunch of scrapers” to crawl rival sites like Twitter and Instagram and harvest their social data—with or without their consent. If Twitter or Instagram refused to agree to Zuckerberg’s “reciprocity” proposition, Facebook would use the scrapers to obtain the data instead.

136. In August 2012, Facebook considered broadening its list of companies to shake down for social data—or to block entirely from Facebook’s Platform. That month, Facebook’s then VP of Business and Marketing Partnerships, David Fischer identified other potential product categories and competitive companies in each category to block:

I’d expect that a large part of the market for our network will come from current and potential competitors. Here’s the list that Jud worked up of what we’d likely prohibit if we were to adopt a ban on “competitors” using a broad definition:

- Social network apps (Google+, Twitter, Path, etc.)
- Photo sharing apps (Picasa, Flickr, LiveShare, Shutterfly, etc.)
- Messaging apps (WhatsApp, Viber, Imo, KakaoTalk, etc.)
- Local apps (Google+ local, Google Offers, Yelp, yp, etc.)
- Social search apps (HeyStaks, Wajam, etc.)
- Platforms (Google Play, Amazon, etc.)

137. Facebook thus identified its direct, horizontal competitors for social data, including those competitors that had, or could create, rival social advertising platforms. These categories of competing

1 applications, particularly on mobile platforms, threatened Facebook's business because they created
 2 social networks independent of Facebook, each capable of generating their own valuable social data. If
 3 Facebook lost control over these companies, it would lose access to the social data they generated, which
 4 meant Facebook's own product could not drive engagement and sell advertising. This was because
 5 Facebook's machine-learning algorithms—used to target users for advertising and content, including by
 6 granular demographics—required social data to function.

7 138. In August 2012, Facebook gave a presentation to its Board of Directors that included
 8 various revenue models to monetize its Platform, including its APIs. The Board understood that Facebook
 9 could monetize its Platform by charging per company, per application, per user, or per API call.

10 139. But Facebook opted to do none of those things. Instead, it decided to sacrifice those profits
 11 in the short term to obtain complete control over the growing mobile application and advertising markets,
 12 thereby maintaining and furthering its dominance of social data and the Social Advertising Market.

13 140. Facebook's plan was to instead block competitors from using its Platform, thereby
 14 preventing them from eroding the DTBE that protected Facebook's business. In the case of a select few
 15 companies with social data that Facebook needed to maintain and grow its own business, however,
 16 Facebook would coerce them into agreements to share their most valuable social data with Facebook. If
 17 they refused, Facebook would blacklist them and take it from them anyway with its own crawling
 18 software that would scrape their public-facing site for information.

19 141. In September 2012, Zuckerberg formalized his order to shut down the Friends and News
 20 Feed/Timeline APIs and to coerce rivals into providing their valuable data to Facebook on pain of
 21 blacklisting. On October 30, 2012, Vernal notified his subordinates of Zuckerberg's decision:

22 We are going to dramatically reduce the data we expose via the Read API
 23 We are going to change friends.get to only return friends that are also
 24 using the app Since friends.get will only return other TOSed users'
 25 data [data from users that agreed to an application's terms of service], that
 26 means we no longer need the friends_* permissions. We are going to
 27 remove/whitelist access to the Stream APIs [the News Feed API]. We are
 28 going to limit the ability for competitive networks to use our platform
 without a formal deal in place We are going to require that all platform
 partners agree to data reciprocity.

1 142. This decision meant several things: (1) when a third-party application called the Friends
2 APIs, it could not obtain information about a user's other friends unless those friends already had installed
3 the application; (2) the News Feed APIs would no longer provide information about a user's connections;
4 (3) access to those API could be "whitelisted" for third-party developers that were offered—and agreed
5 to—data reciprocity; and (4) reciprocity would be required for any access to the APIs.

6 143. In November 2012, Osofsky, who was then head of Facebook's Platform, summarized the
7 policy changes required by the decision:

8 Policy changes: define competitive networks + require they have a deal
9 with us, regardless of size. Maintain size-based thresholds for all other
10 developers to force business deals. Require data reciprocity for user
 extended info to ensure we have richest identity.

11 144. Facebook knew that these changes would eliminate the "growth channel used by 23% of
12 all Facebook apps" and that 89% of the top 1,000 iPhone apps relied on the full friends list API, with
13 75% of the top 1,000 iPhone apps relying on the Friends permissions APIs. Facebook determined that
14 popular applications on its platform with millions of customers would break as a result of the decision,
15 including FarmVille, ChefVille, CityVille, Skype, Spotify, Xobni, Texas Holdem, Yahoo, Trip Advisor,
16 Microsoft's Birthday Reminders, Samsung's clients, Glassdoor and dozens of others.

17 145. On November 19, 2012, Zuckerberg broadly announced his decision to block competitors
18 or require full data reciprocity for continued access. Facebook's COO Sheryl Sandberg immediately
19 ratified the decision, adding that "we are trying to maximize sharing on Facebook, not just sharing in the
20 world," with the note that the distinction was a "critical one" and the "heart of why."

21 146. Facebook began preparing its 2013 plan for its mobile advertising business, which
22 included the launch of a new version of its Platform, version 3.0. Platform 3.0 would (according to
23 Facebook) facilitate Facebook's transition from its desktop advertising business to a mobile advertising
24 business. A central element of the transition plan was the implementation of Zuckerberg's decision to
25 remove the Friends and News Feed APIs.

26 147. Vernal explained Zuckerberg's decision to other Facebook employees in November 2012,
27 noting that he believed the amount of data that Facebook required from competitors was "crazy":
28

1 [A company must share] every piece of content by that user that can be
 2 seen by another user. What Mark is saying is he wants certain partners (I
 3 assume not all) to give us news feeds on behalf of their users, which is kind
 4 of crazy.

5 148. Facebook continued to formalize its plan to require the right to crawl the sites of its
 6 competitors as a condition of access to its Platform. In November 2012, Facebook's Group Product
 7 Manager, Rose Yao explained the scheme:

8 We also reserve the right to crawl a partner website for the user's data.
 9 Partners cannot blacklist or block Facebook from crawling your site or
 10 using the API. If they do, Facebook reserves the right to block the partner
 11 from using our APIs The theory behind Action Importers was that we
 12 needed to balance the leverage. You can call our APIs and access our data,
 13 as long as we can call your APIs (if you have them) or crawl your web site
 14 (if not) and access your data. It's one thing to drag your heels, but if we're
 15 the ones doing the work then we force you to make a decision—either you
 16 allow us access to your data, or you block us. If you block us, then it's
 17 really easy/straightforward for us to decide to block you. What's changed?
 18 *When we first started discussing this, we were talking about doing this*
 19 *only for top partners. I think a lot of folks interpreted this as just a*
 20 *negotiation tactic—we'd just threaten to do this if they didn't cooperate.*
 21 *What's changed between then and now is that this is now very clearly not*
 22 *a negotiation tactic—this is literally the strategy for the read-side*
 23 *platform.*

24 (emphasis added).

25 149. Thus, what began as a negotiation strategy to extract social data from rivals became the
 26 foundation of Facebook's Platform strategy. For competitors that posed enough of a threat to create their
 27 own rival network, Facebook required them to hand over the only leverage they had—the social data they
 28 derived from their users' engagement.

150. For some rivals that directly competed, no amount of data would justify access to
 Facebook's Platform, and for nascent threats that relied on Facebook's platform that did not have any
 useful data to extract, Facebook's decision was to simply cut off their access to the Friends and News
 Feed APIs, killing their businesses almost immediately.

151. Vernal expressed concern about the strategy to Zuckerberg in November 2012, noting that
 he was skeptical that competitors such as Pinterest would allow Facebook to take their social data. If they,
 as well as others, did, Facebook would become a central exchange for data collected among competitors.

1 That is, competitors would share the data to Facebook and Facebook would then share that data back to
 2 the competitors that participated in the scheme. ***Facebook would become a data-passthrough***
 3 ***mechanism.***

4 152. In December 2012, despite recognizing that API access, particularly when bundled with
 5 Facebook's NEKO advertising platform, was profitable, Facebook decided not to charge for API access
 6 and began full implementation of Zuckerberg's decision.

7 153. Although Facebook had planned to announce its decision not to allow access to Friends
 8 data through its Friends and News Feed APIs in a public blog post, Zuckerberg vetoed that decision in
 9 December 2012. Instead, Zuckerberg decided to enforce the decision selectively and covertly after
 10 deliberately analyzing Facebook's competitors. Some competitors would be blocked entirely from the
 11 APIs, while some select few would be blocked only if they did not provide their own social data to
 12 Facebook.

13 **C. Facebook Targets Its Competitors for Reciprocity or Denial of API Access**

14 154. Beginning in January 2013, Facebook began an internal audit of all of the applications that
 15 relied on its Platform. It immediately identified competitors to shutdown entirely from accessing
 16 Facebook's APIs or advertising platform. Specifically, Zuckerberg ordered that WeChat, Kakao, and Line
 17 be restricted from using the Friends and News Feed APIs and even from advertising on Facebook's
 18 NEKO and other platforms.

19 155. Facebook's David Fischer balked at the decision, noting that blocking competitors even
 20 from the advertising platform was irrational and unworkable:

21 I continue to believe we should allow ads from competitors for several
 22 reasons: We should be secure enough in the quality of our products to
 23 enable them to compete effectively in the open marketplace It looks
 24 weak to be so defensive. This will be a challenge to enforce. We have many
 25 competitors and the list will grow in time. How will we judge retailers and
 e-commerce sites as we grow Gifts, since they arguably are competitors
 too?

26 156. Fischer was right. The decision made no rational economic or business sense. The sole
 27 purpose of refusing to sell social data as part of the Facebook Platform or through advertising was to shut
 28

1 out competition and allow Facebook to dominate the Social Advertising Market. Aside from that
2 anticompetitive purpose, the decision to refuse to sell social data or advertisements even at full price was
3 so facially irrational that Facebook's own employees who may not have been fully privy to the
4 anticompetitive scheme protested at the irrationality of the decision.

5 157. That same month Facebook's Osofsky pleaded with Vernal to make an announcement that
6 would send a clear signal to developers, but Vernal responded that Zuckerberg had already rejected that
7 approach. As Vernal explained, telling developers about the decision means bearing the "very real cost"
8 of "changing the rules," including the "PR cost" of betraying developers that Facebook had induced to
9 build for Facebook's APIs and Platform.

10 158. That same month, Facebook continued to implement Zuckerberg's decision to blacklist
11 competitors. He ordered that Facebook competitor Vine be "shut down" from Facebook's API and
12 Platform, including from advertising. Facebook had again sacrificed the profits it would glean from
13 increased engagement and advertising revenue as a result of Vine's use of Facebook's Platform in
14 exchange for the exclusion of Vine from the competitive landscape.

15 159. Indeed, Facebook's mobile advertising platform was growing rapidly, and blocking large
16 companies from using it made no economic sense other than to effectuate Zuckerberg's scheme to prevent
17 rivals from competing with Facebook. In a January 20, 2013 email, Facebook's then-Director of Product
18 Management and Platform Monetization team, Deborah Liu reported: "Neko grew another 50% this
19 week! Hit a high of \$725k Friday (see charge below). We are now 5% of total Ads revenue and 21% of
20 mobile ads revenue."

21 160. Lessin responded to the news: "The neko growth is just freaking awesome. Completely
22 exceeding my expectations re what is possible re ramping up paid products."

23 161. Liu was clear, however, that the increased revenues occurred notwithstanding the
24 blacklisting of formerly large spenders, such as WeChat: "WeChat and other competitive networks are
25 no longer advertising on Neko based on policy."
26
27
28

1 162. In February of 2013, Facebook shut down Yahoo’s access to key APIs, resulting in direct
2 negotiations between Yahoo’s Marissa Mayer and Facebook’s Sheryl Sandberg in order to restore
3 Yahoo’s access to the Facebook Platform.

4 163. In March 2013, Facebook’s key Platform employees began to voice concern that the
5 approach taken by Facebook of shutting down access and then coercing “data reciprocity” was
6 problematic. They instead encouraged making an upfront announcement that the APIs would be
7 unavailable and then negotiating a deal for access to Facebook’s Platform. In an e-mail that month from
8 Purdy to other Facebook employees and executives, he wrote:

9 I have been thinking about the challenges around reciprocity and
10 competitive enforcement (friends.get, etc.) and fact that *it is all post facto*.
11 The way we are structured today, you build an app on FB and then launch
12 and then we may just shut you down, harming users and the developer. I
13 wonder if we should move as quickly as possible to a model in product
14 where all you get from platform is login (basic info) and sharing without
15 approval. All other APIs are available in development, but have to be
16 approved before the app launches to real users (basically all apps using
17 friends.get have to have that capability approved). We are roughly on
18 course to deliver this as part of unified review, save for the more granular
19 approval for things like friends.get? What I love about this too is we could
20 make our whitelists so much cleaner by making each capability an approval
21 thing. Marie: I think makes your “deprecations” much easier. Thoughts?

22 164. Although Facebook moved towards full deprecation of the APIs with the exception of
23 those with whitelisting agreements, it continued its campaign of quietly shutting down competitors’
24 access to the APIs and then asking them to make a reciprocity deal. Indeed, Facebook soon thereafter
25 shut down three competing Amazon apps, resulting in Amazon protesting that the decision “will break 3
26 of our live integrations.”

27 165. That same March in 2013, Facebook used API and Platform access as leverage to acquire
28 rival Refresh.io. Facebook internally decided that it would threaten Refresh.io with denial of access to
the APIs unless it sold its business to Facebook. That same form of leverage would be used to acquire
other rivals—either they sold to Facebook or they saw their business ejected from Facebook’s Platform.

 166. In 2013, Facebook also began using mobile spyware company Onavo to secretly track
application usage on customers’ phones. Onavo, through deceptive terms of service, tracked app usage

1 in real time, and Facebook used that data to target specific competitors. By April 2013, Olivan was using
2 Onavo to track Snapchat, Pinterest, WhatsApp, Tumblr, Foursquare, Google, Path, vine, Kik, Voxer,
3 MessageMe, Viber, GroupMe, Skype, Line, and Tango. One internal Olivan presentation contained
4 detailed usage data for these applications from August 2012 to March 2013.

5 167. By July 2013, Onavo data was providing detailed intelligence to Facebook on 30 million
6 Onavo users. Among all of the apps, the data showed the meteoric rise of WhatsApp, a direct competitor
7 to Facebook's own fledgling product, Messenger.

8 168. Armed with detailed intelligence about its competitors—both on and off the Facebook
9 Platform—Facebook ordered a detailed audit of Facebook applications that relied on the Friends and
10 News Feed APIs.

11 169. Facebook's Director of Developer Platforms & Programs, Konstantinos Papamiltiadis,
12 reported back that there were 40,000 apps using the APIs that were to be restricted, with 7% of them
13 being photo or video sharing apps.

14 170. Facebook then began to categorize these third-party applications into three general
15 categories: (1) developers that "may cause negative press" if their access to APIs were shut down; (2)
16 applications that "provide strategic value"; and (3) applications that were "competitive" or "not useful to
17 FB. Application developers that would experience "a Major Business Disruption/Kill" as a result of the
18 restriction of API access received a "PR flag."

19 171. In response to the categorization, Lessin immediately ordered his subordinates to "shut
20 down access to friends on lifestyle apps . . . because *we are ultimately competitive with all of them.*"
21 (emphasis added).

22 172. As Facebook continued its analysis of the applications that relied on the Friends and News
23 Feed APIs, it became clear that Facebook's plan would result in the deprecation of the "majority of the
24 API surface"—namely, the APIs that were the most essential parts of the Facebook Platform.

D. The Decision to Remove Developer Access to the Friends, News Feed and Other Crucial APIs Lacked Any Legitimate Justification

173. The engineers tasked with implementing Zuckerberg’s decision to restrict access to the APIs were baffled. The decision made no technical sense whatsoever. Indeed, there was no justification for it other than to squelch competitors who threatened Facebook’s dominant position and DTBE.

174. As Facebook engineer, David Poll, had written to all Platform Engineers earlier in 2011, the decision would mean gutting the Facebook Platform of functionality used—and needed—by some of the most important mobile apps built on Facebook’s Platform:

I was thinking about the Platform 3.0 friend list change a bit as I was using my Android phone tonight and realized that two for the apps that most impact my day-to-day mobile experience will be completely, irrevocably broken by this change In both of these cases, the apps are adding real value to my experience, and in both of those cases, I have zero expectation that any of my friends will be using the app. The fundamental problem I’m having with this change is that my friend list is my information—it’s part of who I am, and for Facebook to shut down this access primarily comes across to me as FB intruding upon and shutting down my own access to my own information.

175. Poll concluded, “No matter how you slice it, this change is going to have a significant negative impact on my day-to-day smartphone experience.”

176. Poll was correct. The change meant breaking applications that added significant value to Facebook’s network and increased valuable user engagement on Facebook’s core product. The decision to deliberately break these applications had only one plausible purpose—to strengthen the DTBE and to ensure that competitors could not create rival social networks that could compete with Facebook.

177. That proposition was entirely obvious to those responsible for Facebook’s Platform. In an August 2013 e-mail, senior Platform engineer Bryan Klimt wrote to Ilya Sukhar, Facebook’s Head of Developer Products and Senior Engineer working on its APIs, and others working on Facebook’s Platform, stating that the reason for the decision to block access to the Friends and News Feed APIs was to exclude competitors and that all other reasons were simply false and pretextual. To begin with, Klimt was clear that the removal of the APIs was “ridiculous” because they were so essential to the Facebook Platform:

1 I'm trying to write a post about how bad an idea it would be to remove the
2 api that lets you get a list of user's friends from Facebook Platform. In order
3 to illustrate my point, I'd like to satirically suggest removing some API that
4 is so core to the developer experience and that removing it would be
5 ridiculous on its face. For example, removing the Windows API method
6 that lets you create a new window. Or removing the Twilio API method
7 that lets you send a text message. Both suggestions are utterly insane. The
8 problem is, for Facebook Platform, removing the method to let you get a
9 list of friends literally is already that ridiculous. I can't think of an example
10 more ridiculous to parody it with.

11 178. Klimt then dispelled any notion that the APIs were being removed for any technical or
12 functionality-driven reason:

13 Before we discuss in more detail, I'd like to clear up some misconceptions
14 about the deprecations. I've heard some rumors floating around about why
15 we are doing this. But many of them are clearly pabulum designed to make
16 engineers think this decision has solid technical reasons. It does not. 1/ This
17 API can be abused so we can remove it. False. That is a non-sequitur. Lots
18 of APIs can be abused. Our whole product can be abused. That's why we
19 have one of the best teams in the industry at detecting and stemming abuse.
20 That team, plus Unified Review, is more than sufficient to deal with any
21 theoretical abuse coming from this API. Even if this were true, who wants
22 to be in that classroom where the whole class is punished for transgressions
23 of a few?

24 179. Klimt also was clear that the APIs were not being removed in favor of new or different
25 APIs providing the same features:

26 2/ It's okay to remove because we've provided alternatives for common
27 uses. False. If you think that's true, then I don't think you realize why
28 developer platforms exist. If we wanted to limit Facebook to the set of use
cases we've already imagined, we could just do that ourselves, and not even
have a Platform. The purpose of a Platform is to let people build new things
on top of it. It's to enable the whole universe of ideas that anyone in the
world could think of. Developers out there will have all sorts of crazy ideas.
We want them to build those crazy ideas on top of Facebook. Do you know
why Facebook was originally built for the WWW instead of being part of
CompuServe or AOL's proprietary networks? It's because the web is an
open and extensible platform. It lets developers make their craziest become
reality.

180. Klimt then explained that the real reason was to hurt Facebook's competitors and prevent
them from competing with Facebook:

So, if neither of those reasons explains why we are doing this, what's driving it? The only reason I've heard that makes sense is that we are worried about people "stealing the graph", ***we are doing this as a protectionist grab to make sure no one else can make a competing social network by bootstrapping with our social graph.*** Okay, so let's assume for a minute that the social graph does belong to us, and not to our users. And let's even go so far as to assume that this is a real problem, although, I'm not convinced it is. I mean, concerns that other companies will steal our friend graph may just be paranoia. But for the sake of argument, let's say it's not. Then what? ***We're removing the core API in our developer platform. Out of concerns that someone will steal our social network product.*** That sends a clear message to developers: Facebook Platform comes second to Facebook the Social Network Product. This has been a criticism all along with our Platform. When you go read the blog posts critical of our Platform, they all hit on this same point. When our APIs are subjugated to the whims of our other products, they can't be stable. And an unstable platform isn't really a platform at all. So then you are left with 2 big problems. 1/ How do you convince external developers to build on a platform where the most basic core APIs may be removed at any time? I mean, the only big value we bring to the table right now is in distribution and discovery, and that's going to encourage developers to do only the most superficial integration with Facebook. Basically, they're going to do just enough to be able to use Neko ads. 2/ How do you convince internal developers to work on Platform knowing it's only ever going to play second fiddle to the rest of the company? I mean why should any of us work on a product that could be crippled at any time to benefit another team? If I worked on Platform, I would be seriously reconsidering my options if this API gets deprecated.

(emphasis added).

181. Klimt was clear—the decision to remove the APIs lacked any technical or business justification other than to prevent a competitor from creating a competing social network, eroding the DTBE protecting Facebook's business. Any proffered justification by anyone at Facebook to the contrary was entirely pretextual.

182. Moreover, the decision to remove the APIs permanently destroyed the value of Facebook's Platform. If developers could not trust Facebook to maintain the APIs as stable parts of its Platform, they would not risk writing apps for the Platform in the future. The decision meant scuttling Facebook's valuable Platform for the ability to prevent a rival social network from taking hold.

1 183. Sukhar responded to Klimt, noting that he agreed and that he “talks about this every single
2 meeting.” His pleas to Vernal, Purdy and Zuckerberg to reverse their decision fell on deaf ears. The
3 decision had been made and Klimt and Sukhar would have to implement it.

4 184. Facebook continued its audit of apps that relied on the APIs. Most of the Apps were
5 important to the Facebook ecosystem. Indeed, Facebook acknowledged they “are not spammy or crap,
6 but apps users like a lot.” Nonetheless, Facebook’s Papamiltiadis concluded that, among others, apps like
7 Sunrise, Yahoo, IFTT, Friendcaster, MyLife, Sync.me, YouTube, Contacts+, and Bitly “overlap with
8 Facebook products” and “could compromise our success in those areas.”

9 185. Facebook’s careful monitoring of competitive apps continued well into 2013, and given
10 its heavy reliance on data secretly collected by Onavo, Facebook purchased Onavo on October 14, 2013.
11 Facebook used that data to determine which apps competed with its social network and thus posed a threat
12 to the DTBE. It then targeted those companies for withdrawal of API access and coerced data reciprocity
13 agreements.

14 186. In October 2013, Facebook’s Purdy reported that Facebook was dividing apps into “three
15 buckets: existing competitors, possible future competitors, developers that we have alignment with on
16 business model.” Facebook’s Eddie O’Neil believed that the “separation between those categories doesn’t
17 feel clean” and that the overlap was problematic. As O’Neil observed, “apps can transition from aligned
18 to competitive and will ultimately make us sad that we leaked a bunch of data to them when they were
19 aligned.”

20 187. Sukhar objected to the entire exercise, noting that he had been speaking to many dozens
21 of developers “who will get totally fucked by this and it won’t even be for the right reason.” Sukhar
22 explained that his “engineers think *this plan is insane* and I’m not going to support an all hands [meeting]
23 to convince them otherwise.” (emphasis added).

24 188. As Sukhar noted, the decision to withdraw the Friends and News Feed APIs from the
25 Platform made no technical sense whatsoever, and Sukhar could not bring himself to tell his engineers—
26 who saw through the ruse—otherwise. It was obvious that Facebook was seeking to squelch potential
27 competition—namely, by preventing user growth and engagement for competitive apps. As one Facebook
28

1 engineer commented about the obvious purpose of the plan to remove the APIs: “I understand we want
2 to make it hard for a developer to grow a new app.”

3 189. The review of apps continued and specific decisions with respect to certain highly
4 sensitive competitors were escalated to Mark Zuckerberg. As one internal Facebook e-mail explained:

5 We maintain a small list of strategic competitors that Mark personally
6 reviewed. Apps produced by the companies on the list are subject to a
7 number of restrictions outlined below. Any usage beyond that specified is
8 not permitted without Mark level signoff.

9 190. In December 2013, Klimt complained to Sukhar about the audit and categorization
10 process:

11 So we are literally going to group apps into buckets based on how scared
12 we are of them and give them different APIs? How do we ever hope to
13 document this? Put a link at the top of the page that says “Going to be
14 building a messenger app? Click here to filter out the APIs we won’t let
15 you use!”

16 And what if an app adds a feature that moves them from 2 to 1. Shit just
17 breaks? And messaging app can’t use Facebook login? So the message is,
18 “if you’re going to compete with us at all, make sure you don’t integrate
19 with us at all.”? I am just dumbfounded.

20 191. As Poll recognized in response to Klimt’s complaint, the changes to Facebook’s Platform
21 were “more than complicated, it’s sort of unethical.” Klimt agreed with the assessment, noting that the
22 API removal “feels unethical somehow It just makes me feel like a bad person.”

23 **E. Facebook Prepares to Announce Removal of the APIs**

24 192. Zuckerberg decided to announce the API removal under the cover of a major change to
25 the Facebook Platform, codenamed PS12N, which would be announced at the next Facebook F8
26 Developer Conference. Facebook’s engineers were accordingly instructed in September 2013 to bury the
27 changes to the API and announce them quietly along with the changes that would be announced at the
28 conference.

193. In the run-up to its API withdrawal announcement, Facebook continued its audit of
applications on its platform that were using the APIs. During that process Facebook continued to classify

1 potential competitors, including LinkedIn and AirBnB, as companies that would be denied access with
2 no whitelist exception.

3 194. Although Facebook knew that the APIs were going to be removed by the next F8
4 conference, it continued to tell developers to rely on them. As a Facebook Platform evangelist noted about
5 one particular document frequently shared with developers, “the language in here around friend
6 permissions is very counter to our upcoming platform simplification efforts” and “feels against the spirit
7 of where we are headed.”

8 195. That was, however, precisely what Facebook wanted—to continue to entice developers to
9 build their software and their businesses on APIs that made them dependent on Facebook. The use of the
10 APIs meant that competitors could be abruptly shut out of the market, useful apps could be extorted for
11 valuable social data, and the rest could simply be destroyed.

12 196. By October 2013, Facebook required certain application developers it chose to whitelist
13 to sign Private Extended API Agreements, which obligated them to purchase large amounts of advertising
14 or to provide their own valuable social data to Facebook in exchange for continued access. That month,
15 for example, Facebook whitelisted Royal Bank of Canada’s application in exchange for the purchase of
16 social data through Facebook’s NEKO advertising platform.

17 197. Facebook catalogued and tracked developers on its platform that would likely complain
18 about the decision, creating negative press. Facebook’s internal employees tasked with crafting a PR
19 message explained the undertaking in a December 2013 e-mail:

20 In prep for Platform Simplification, we’re putting together a list of
21 developers who we think could be noisy and negative in press about the
22 changes we’re making: Primarily we think it will be a list of the usual
23 suspects from past policy enforcements. We’d love to pull from your
24 historic knowledge on the topic. Is there anybody you’d add to the list
25 below? We’re going to build plans around how we manage and
26 communicate with each of these developers. There are also comms plans
27 in the works for working with developers who are high ad spenders and
28 friends of Mark/Sheryl.”

198. Facebook planned to manage its message carefully, as its decision likely would alienate
even those developers who were making large purchases of social data from Facebook through ads and/or

1 who were friends of Facebook’s two most senior executives, Zuckerberg and Sandberg. Those developers
2 were identified and the message to them was carefully crafted to avoid a PR disaster. For most application
3 developers, however, the decision would result in the complete exclusion of their applications from
4 Facebook’s ecosystem—which would likely be fatal to their businesses.

5 199. Facebook targeted potentially “noisy” or “negative” developers individually, including,
6 but not limited to, the following applications and developers: iLike, Rock You, Zynga, Path, Flipboard,
7 Slide, Social, Fixer, SocialCam, Viddy, BranchOut, Vince, Voxer, Message Me, Lulu, Anil Dash, Super
8 Cell, Kabam, Washington Post, Guardian, The Wall Street Journal, Jason Calacanis, Cir.cl, Bang with
9 Friends, Tinder, Social Roulette, App Wonder, Ark, Vintage Camera, and Girls Around Me.

10 200. Facebook also used call-log data secretly collected by Android users to target developers
11 and applications to be shut down.

12 201. The entire process led Facebook engineer George Lee to lament:

13 We sold developers a bill of goods around implicit OG [Open Graph] 2
14 years ago and have been telling them ever since that one of the best things
15 they could do is to a/b/ test and optimize the content and creative. Now that
16 we have successes. . . . We’re talking about taking it
17 away [Developers] have invested a lot of time to establish that traffic
18 in our system The more I think about this, the more concern I have
19 over the pile of asks were [sic] making of our developers this year. PS12N
20 is going to require them to alter how they deal with APIs (and for limited
21 value).

22 202. Thus, as Facebook continued to prepare its API withdrawal announcement, Facebook’s
23 own executives recognized that Platform developers had been conned into relying on Facebook’s APIs.
24 Facebook knew full well that it intended to remove the APIs, but it allowed and encouraged developers
25 to build entire businesses on and around them. As Lee put it, they were sold a “bill of goods.”

26 203. By 2014, it was clear that with the exception of a few apps and developers, most would
27 be denied access entirely to the Friend and News Feed APIs.

28 204. In January 2014, Zuckerberg debated denying API access to dating apps. Facebook
decided that it would whitelist Tinder and other anointed dating apps and shut down the rest, clearing the
way for the selected apps to dominate the dating market. Zuckerberg reasoned that although Facebook

1 would ultimately create its own dating app, it would let Tinder and a select few others to survive until
2 Facebook's competing app was ready:

3 I've been thinking a lot about Tinder and other people recommendation
4 apps since about 10% of people in many countries are using a Tinder now.
5 People recommendations seems like something that should be right up our
6 alley, but it's currently something we're not very good at. Tinder's growth
7 is especially alarming to me because their product is built completely on
8 Facebook data, and it's much better than anything we've built for
recommendations using the same corpus I think this is a big and
important space and it's something we should have a team working on—
probably to develop people recommendation Hunch sections for now.

9 205. Zuckerberg became increasingly involved in assessing whether individual apps would be
10 whitelisted when the APIs were removed. Facebook's senior-most executives accordingly prepared
11 recommendations for his consideration. In a January 2014 presentation entitled, "Slides for Mark," for
12 example, Facebook employees summarized the results of the ongoing app audit. The presentation
13 observed that the changes would make it "impossible to build" an app without a whitelist agreement with
14 Facebook. The presentation made special recommendations for apps that purchased large amounts of
15 social data through Facebook's NEKO platform or whose developers were friends with Zuckerberg or
16 Sandberg. The bulk of the 41,191 apps that relied on the Friends or News Feed APIs, however, would be
17 shut out and, as a result, completely destroyed.

18 206. Although the effect on these apps was clear, Facebook continued to evangelize the APIs
19 to developers. In January 2014, Facebook's George Lee sounded the alarm to Purdy and Vernal, which
20 fell on willfully deaf ears:

21 [P]artner managers are still selling products that we ask them to sell, so
22 when it comes to feed integration, we're still telling people to use [Open
23 Graph]. The last f8 was all about implicit [Open Graph], so while we may
24 have decided amongst ourselves that this is no longer the future without an
alternative we don't have anything to tell current [developers] (so partners
continue to tell them to use [Open Graph] and they continue to integrate
it).

25 207. The plan to quietly take away the APIs in favor of a new crippled developer platform was
26 called the "switcharoo plan" by Facebook's engineers. It was clear to all involved that the announcement
27
28

1 of the changes to the platform at the upcoming F8 conference was cover for the radical changes Facebook
 2 planned to make to its platform—namely, the removal of the Friends and News Feed APIs.

3 208. During March 2014, Facebook’s engineers and employees continued to be baffled by the
 4 upcoming decision. As one employee noted:

5 It seems a bit odd that we block other developers from doing things on our
 6 platform that we’re ok with doing ourselves. Do we consider ourselves
 7 exempted? That seems a little unfair especially when our stance on some
 8 of these policies is that they’re about ensuring trusts and a great experience.
 My mental model on how platform is a level playing field could be way off
 though.

9 209. The decision made no sense to Facebook’s own employees, particularly because Facebook
 10 itself needed the APIs to make their own competing applications, including Facebook’s Messenger
 11 application. Facebook’s executives ignored all of the concerns raised by their employees, including their
 12 API engineers, and continued to drive towards the announcement of the removal of the APIs at F8.

13 210. The real reason for the removal of the APIs was kept tightly under wraps. In April 2014,
 14 right before the announcement, Vernal warned Sukhar that if any mention was made of the competitive
 15 reasons for the removal of the APIs (as Sukhar wanted), there would be a “high likelihood of breaking
 16 into jail.”

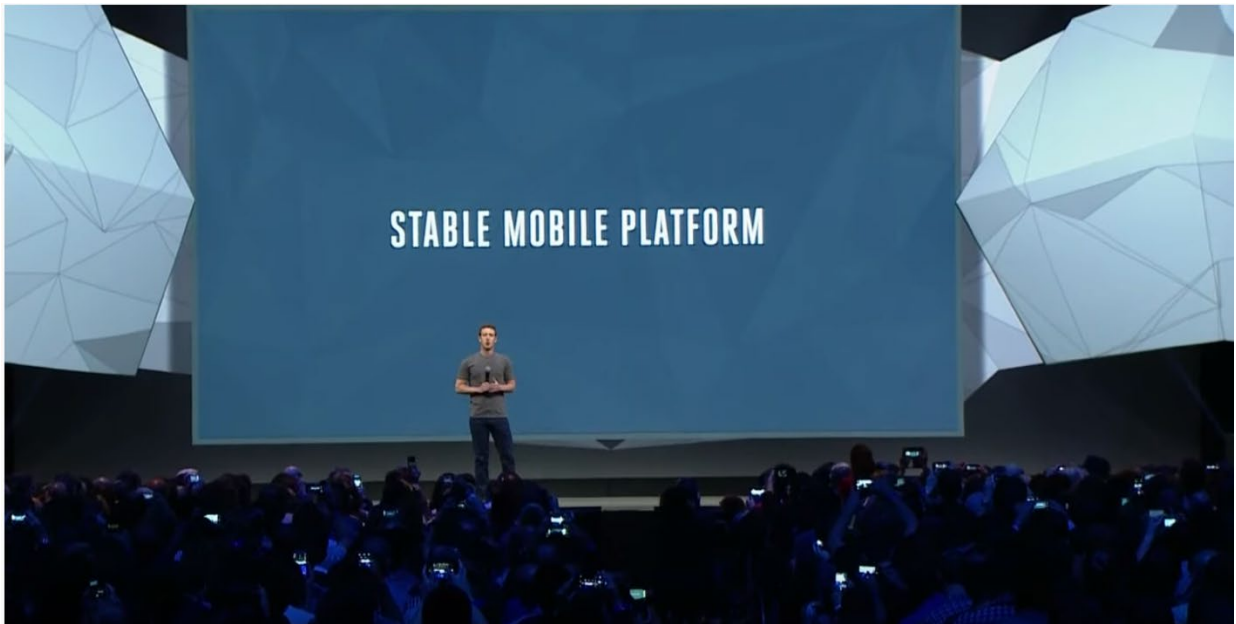
17 **F. The Announcement at F8**

18 211. On April 30, 2014, Facebook announced “The New Facebook Login and Graph API 2.0”
 19 on Facebook’s website. Facebook heralded changes to its new Login system for several pages. Buried in
 20 the announcement was a quiet statement about the Platform’s most important APIs—the Friend and News
 21 Feed APIs: “In addition to the above, we are removing several rarely used API endpoints; visit our
 22 changelog for details.”

23 212. These APIs were not *rarely used* at all. Tens of thousands of third-party apps were actively
 24 using and building on the APIs. Internal Facebook engineers likened them to essential APIs in Microsoft’s
 25 Windows and were outraged at the removal. Five of the top ten Facebook Apps surveyed in December
 26 2012 relied heavily on them. The announcement was entirely false and was deliberately buried beneath
 27 other API announcements to avoid drawing attention to the competition-crippling effect of the decision.
 28

1 In fact, today, the changelog referred to in the announcement is no longer accessible on Facebook's page
2 even though years of other changes are.

3 213. When Mark Zuckerberg took the stage at F8 days later for his keynote speech, there was
4 no mention of the removed APIs. Instead, Zuckerberg emphasized the "stability" of Facebook's mobile
5 platform just as Facebook quietly removed some of the most heavily relied-upon and necessary APIs in
6 Facebook's Platform.



17 214. At the twenty developer sessions preceding the announcement, not one mention was made
18 of the API removal or that the upcoming changes would simply break nearly all of the more than 40,000
19 third-party apps that relied on the APIs. After April 30, 2015, the APIs were no longer part of any
20 available version of Facebook's Platform.

21 215. Facebook thus had successfully destroyed any application that could possibly create a
22 product that could threaten the DTBE that protected Facebook's dominant position and market power. A
23 select few would be required to hand over their most valuable resource—their social data—to their
24 behemoth competitor in exchange for continued access. Others would maintain access in exchange for
25 large advertising purchases, artificially propping up demand for Facebook's mobile advertising platform.
26
27
28

IV. THE WHITELIST AND DATA SHARING AGREEMENTS

216. After the announcement and through the full removal of the APIs in April 2015, Facebook continued to make a series of agreements that forced certain competitors to hand their data over to Facebook. For example, Facebook forced certain third-party developers that it identified as competitive threats with valuable social data to sign Private Extended API agreements—referred to throughout this Complaint as “Whitelist and Data Sharing Agreements” or simply “the Agreements”—in order to obtain access to the Friends and/or News Feed APIs.

217. Facebook’s Whitelist and Data Sharing Agreements, as of January 2015, included a provision that acknowledged that the APIs they covered are not available to the general public. An exhibit to each Whitelist and Data Sharing Agreement listed the specific Facebook APIs to which a particular developer was being granted access.

218. These Agreements were only offered in exchange for massive purchases of Facebook’s social data through mobile advertising and/or through the provision of the developer’s own social data back to Facebook (so-called “reciprocity”).

219. As Facebook executives and engineers understood and acknowledged in internal communications, this scheme allowed Facebook to serve as a “data pass-through” among competitors. Competitors with Whitelist and Data Sharing Agreements provided social data to Facebook, which sold data obtained from one competitor to another whitelisted competitor.

220. If a developer refused to participate in the scheme, it was excluded entirely from Facebook’s Platform because the most important APIs—the Friends and News Feed APIs—would not be available to it.

221. In January 2015, Facebook provided Whitelist and Data Sharing Agreements to the dating apps Tinder and Hinge, because of the value of the social data those applications produced.

222. In February 2015, when Airbiquity (another third-party developer) sought a Whitelist and Data Sharing Agreement, Facebook lied to them, telling Airbiquity that the specified APIs “won’t be available to anyone” after April 30, 2015, and that “all similar integrations will be subject to the same deprecations/restrictions.”

1 223. That same month (February 2015), Facebook secretly signed Whitelist and Data Sharing
2 agreements with other third-party developers, including Netflix, Nissan, and Lyft.

3 224. In April 2015, Facebook’s manager of strategic partnerships, Ime Archibong, internally
4 celebrated the fruition of Facebook’s three-year plan to eliminate its competition through Platform
5 changes: “Three years coming, but the ‘Platform Simplification’ initiative finally lands this week.”

6 225. Also in April 2015—as Facebook finally cut off all public access to the Friends and News
7 Feed APIs—Facebook continued to receive requests for Whitelist and Data Sharing Agreements from
8 companies such as Microsoft, Hootsuite, and Walgreens.

9 226. Facebook had already extracted valuable social data from dozens of competitors, including
10 Foursquare and Pinterest, in the run-up to the announcement and ultimate removal of the APIs. Without
11 discovery, the precise number and identity of those who entered into Whitelist and Data Sharing
12 Agreements with Facebook cannot be known for certain, but publicly available information indicates that
13 dozens of app developers entered into such Agreements with Facebook.

14 227. Absent the Agreements and Facebook’s overall anticompetitive scheme to exclude third-
15 party developers, other companies could have created their own social data through the proliferation of
16 their own competing social networks. The engagement on their competing networks and the social data
17 generated from that engagement would have increased the value of their networks because of network
18 effects. As the amount of social data generated and monetized on these competing networks increased,
19 Facebook’s DTBE would erode, potentially driving more users to new platforms.

20 228. None of that could happen as long as Facebook could coercively demand all of the
21 valuable social data generated on any competing platform. The Whitelist and Data Sharing Agreements
22 ensured that competitive threats such as Foursquare could not accumulate enough social data to create
23 their own feedback loop in—and perhaps come to dominate, through network effects—any market in
24 which Facebook anticipated competing or actually competed.

25 229. The Agreements also ensured that Facebook’s decision to destroy forty thousand
26 applications built on the Friends and News Feed APIs would be effective—and remain so. If Facebook
27 did not control the supply and sale of social data, excluded developers could simply build their
28

1 applications on another platform. But by entering into a network of Whitelist and Data Sharing
 2 agreements, Facebook ensured that no such competing platform could arise. The Agreements
 3 strengthened and preserved the DTBE and/or prevented the proliferation of rival generators of social data
 4 and third-party developer platforms.

5 230. In a world where no such Agreements existed, a rival such as Pinterest or Foursquare
 6 would obtain more engaged users, resulting in more social data that those competitors could monetize
 7 through their third-party or advertising platforms. The thousands of developers denied access to
 8 Facebook's Platform would therefore build their applications on Foursquare or Pinterest instead of simply
 9 going out of business or changing their products/businesses dramatically to survive. By forcing those and
 10 other similarly situated companies to hand over their social data, Facebook made sure its Platform would
 11 be the only viable platform upon which a third-party social application could be built.

12 231. This was in part what Facebook's Product Management Director Sam Lessin had posited
 13 in a March 2012 e-mail suggesting that Facebook become a "super-set" of Pinterest. If Facebook was a
 14 superset of a rival's data and targeting capabilities, that rival would be neutralized as a possible
 15 independent threat.

16 232. As explained below, the only remaining threat to Facebook's Social Advertising
 17 dominance was from a completely independent competitor that did not rely on Facebook's Platform, and
 18 thus could not be extorted into handing over its data in exchange for API access. For such companies,
 19 Facebook would pay any price to remove them from the market—and use their assets to strengthen
 20 Facebook's DTBE.

21 233. But first, Facebook had to identify such threats to its market dominance. Enter Onavo.

22 **V. GAMES AND CANVAS-BASED APPS ARE EXEMPTED FROM FACEBOOK'S 2015**
 23 **ATTACK ON DEVELOPERS**

24 234. App installs, particularly for games on Facebook's platform, were largely exempted from
 25 Facebook's 2015 attack on third-party developers.

26 235. After the Core API access was purportedly eliminated, Facebook nonetheless allowed
 27 game developers to read friend-of-friends data (in addition to developers it had secretly whitelisted).
 28

1 236. Facebook, for example, allowed game developers continued access to the “invitable
2 friends” API endpoint, which allowed a game developer to determine if a user had friends that had not
3 yet installed and/or played their game or app.

4 237. Using this API endpoint required a user access token that contained a “user friends”
5 permission. Moreover, Facebook stated that “[t]he edge is only available to Games with a Canvas
6 presence.” (Canvas was a developer tool that allowed app developers to display full screen Facebook ads
7 on mobile devices.)

8 238. Facebook further explained in its documentation: “If your app is cross platform and shares
9 the same app ID on iOS or Android, you can access the list of invitable friends on mobile platforms too.”

10 239. For social games, this was immensely important functionality. Without continued access,
11 games could not virally grow across a user’s network of friends, and the ability to virally grow through
12 Facebook’s network was the impetus for developers to create a social app and to make ad purchases.

13 240. Despite statements to the contrary in 2015, Facebook had not in fact eliminated the Core
14 API functionality. It not only continued to provide Core APIs to whitelisted developers but exempted an
15 entire category of developers from its purported deprecation.

16 241. These exempted developers were able to mine Facebook’s Graph for user
17 interconnections. This persisted until April 4, 2018, when Facebook removed access to the endpoint. In
18 a developer blog post by Ime Archibong, Facebook stated:

19 Deprecated: A number of Games APIs around scores and achievements.
20 We are also removing the invitable friends API for Facebook web games,
21 which allows an app to invite people who haven’t played the game before.
22 App requests for existing players of a game will continue to function
23 normally.

24 242. Around the same time, Facebook also removed access to the “user_friends” permission
25 unless the app was reviewed and approved by Facebook.

26 243. In other words, for years after Facebook told developers it had removed the Core APIs, it
27 continued to offer them (and/or their functionality) to those Facebook selected for special treatment—
28

1 particularly, to apps that provided Facebook with either substantial advertising purchases or their own
2 users' data.

3 244. Moreover, Facebook's repeated statements that access to friends information was only
4 granted on a temporary basis to certain apps after 2015 were also false. As explained below, Facebook
5 made these false statements to hide the actual (anticompetitive) reasons for its 2015 attack on developers.

6 **VI. THE SURVEILLANCE AND ACQUISITION OF COMPETITIVE THREATS**

7 245. To ensure that its scheme to maintain and expand its market power would work, Facebook
8 had to control an important source of competition: independent social networks and producers of social
9 data. Although Facebook could simply destroy any competition that relied on its Platform by denying
10 access to essential APIs, this would do nothing to stop a competitor that was growing its network of
11 engaged users entirely independent of Facebook.

12 246. To detect such threats before they became too formidable, Facebook sought a way to
13 covertly surveil millions of mobile users to determine what applications they were using, and how. Mobile
14 applications were particularly important—and concerning—to Facebook, as desktop engagement was
15 shrinking while mobile apps rapidly proliferated. By 2012, it was clear to Zuckerberg and to Facebook
16 that any threat to its dominance would come from a mobile application. As explained in this section,
17 Facebook used mobile spyware on an unprecedented scale to surveil, identify, and eventually remove
18 from the market through acquisition competitors that independently threatened Facebook's dominance
19 and/or the DTBE protecting its monopoly, market power and business.

20 **A. Facebook Relies on Onavo's Surveillance of Facebook's Competitors, and** 21 **Acquires and Uses Onavo's Assets**

22 247. Onavo was an Israeli mobile web analytics company founded by Roi Tiger and Guy Rosen
23 in 2010. The company designed spyware designed to surveil users as they used their mobile devices. To
24 obtain extensive information on a user's usage of mobile applications and of bandwidth, Onavo cloaked
25 its spyware in virtual private networks ("VPNs"), data compression, and even in mobile privacy apps.

26 248. Onavo sold the mobile usage data it collected to Facebook, which in turn used the real-
27 time information it received from Onavo to determine which mobile applications posed a threat to
28

Facebook's dominance and to the DTBE protecting Facebook from new entrants and competition. Facebook used Onavo data to: (a) identify and target competitors from which Facebook could demand Whitelist and Data Sharing Agreements; (b) identify and target competitors to whom Facebook would completely deny Platform access; and (c) identify and target competitors that Facebook would remove from the competitive landscape entirely through acquisition.

249. Facebook received Onavo information in real time, which included the two most important metrics for competing mobile applications—their reach and engagement. Reach measures the size of an application's user base, and "engagement" measures the extent to which users actively engage with the application. An application with high reach but low engagement cannot generate the sort of social data that Facebook needs to feed its advertising platform with actionable targeting data. Conversely, an application with high engagement but low reach doesn't generate social data from enough people to attract a broad base of advertisers. The greatest threat to Facebook's business would come from an application that exhibited strong reach and strong engagement—and especially one that showed rapid growth in both metrics, indicating the development of network effects.

250. As the potential threat to its market dominance from mobile applications continued to grow, Facebook sought to obtain exclusive control over Onavo's surveillance data—and over its mobile spyware code and installed base. On October 13, 2013, Facebook acquired Onavo.

251. On its blog, Onavo's CEO Guy Rosen and CTO Roi Tiger, announced that Onavo would continue as a standalone brand: "When the transaction closes, we plan to continue running the Onavo mobile utility apps as a standalone brand. As always, we remain committed to the privacy of people who use our application, and that commitment will not change."

252. Facebook, however, had other plans. It immediately began integrating Onavo's applications into both its business operations and its acquisition strategy. Facebook, for example, began analyzing data secretly collected from Onavo's Protect software, which was a massive surveillance and data collection scheme disguised as VPN software. Billed as a way to "keep you and your data safe," Onavo Protect in fact monitored all web and mobile application traffic on a user's mobile device.

1 253. When an Onavo Protect user opened a mobile app or website, Onavo software secretly
2 redirected the traffic to Facebook's servers, where the action was logged in a massive database. Facebook
3 product teams then analyzed the aggregated Onavo data to determine which apps and features people
4 were using in real time, how frequently they used the apps, and for how long. If the data in an app was
5 not encrypted, this information was as specific as (for example) the number of photos the average user
6 likes or posts in a week in that app.

7 254. Based on a 2017 estimate, Onavo's mobile apps were downloaded an estimated twenty-
8 four million times, and Facebook collected, compiled, and leveraged all of the collected data. By February
9 2018, Onavo apps had been downloaded thirty-three million times across both iOS and Android.

10 255. As the former chief technologist for the Federal Trade Commission remarked to the press,
11 Onavo was being leveraged against user interests to stifle competitive innovation:

12 Instead of converting data for the purpose of advertising, they're
13 converting it to competitive intelligence Essentially this approach
14 takes data generated by consumers and uses it in ways that directly hurts
15 their interests—for example, to impede competitive innovation.

16 256. Since 2011 and through the present, Onavo products have provided Facebook with real
17 time data about mobile users on a breadth and scale not available through any other service or app. Using
18 Onavo data, Facebook was able to determine which potential competitors it could target for its Whitelist
19 and Data Sharing agreements; which competitors it could destroy by denying access to crucial APIs; and
20 which competitors is needed to remove from the market through acquisition to preserve its monopoly
21 position and DTBE.

22 257. Moreover, by monitoring potential threats, Facebook ensured that it had no blind spot—
23 any application that posed a threat to its dominance was dealt with through anticompetitive and unlawful
24 Whitelist and Data Sharing Agreements, destruction by denial of access to vital APIs on Facebook's
25 platform, or by acquisition.

26 258. By acquiring Onavo, Facebook obtained exclusive access to the only real-time and high-
27 quality source for mobile app user metrics at scale. Because of the acquisition of Onavo, Facebook
28 strengthened the DTBE by ensuring that any threat to its dominance of the Social Advertising Market

1 was dealt with at the earliest possible stage. Indeed, through Onavo, Facebook was able to (and did) track
2 mobile app usage and trends essentially from launch. If a potential Facebook killer was on the rise,
3 Facebook had a unique tool to identify it before anyone else could—and Facebook used it.

4 259. In the years after it acquired Onavo, Facebook continued to aggressively leverage the
5 company's codebase in deceptively labeled apps that facilitated maximum surveillance and data
6 collection of mobile users. For example, Facebook placed Onavo spyware in apps whose stated purposes
7 required privileged access to user's mobile devices (in some cases, super-user privileges), allowing
8 Facebook to gather data on virtually every aspect of a user's mobile device usage.

9 260. The abuses by Facebook were so flagrant that on August 22, 2018, Apple banned
10 Facebook's Onavo app from its App Store. Apple ejected Facebook's app from its marketplace because
11 it violated Apple's rules prohibiting apps from using data in ways far beyond what is required to run the
12 app and provide advertising. In other words, because Onavo Protect was leveraging far more data than
13 any VPN could conceivably need, it was clear that the true purpose of the app was to spy on Onavo users,
14 and Apple would not allow it.

15 261. Indeed, the amount of surveillance was jaw-dropping. Facebook's Onavo Protect app
16 reported on users' activities whether their screens were on or off; whether they used WiFi or cellular data;
17 and even when the VPN was turned off. There was simply no rational relationship between the data
18 collected and the purported purpose of the application. Put simply, a VPN that collected data even when
19 the VPN was off was an obvious subterfuge for blatant spying on user behavior.

20 262. Undeterred, Facebook repackaged its Onavo spyware as a Facebook Research VPN app.
21 Facebook sidestepped the App Store by rewarding teenagers and adults when they downloaded the
22 Research app and gave it root—superuser—access to network traffic on their mobile devices. Facebook
23 has been leveraging its Onavo code in similar ways since at least 2016, administering the program under
24 the codename "Project Atlas"—a name suited to its goal of surveilling app usage on mobile devices in
25 real time.

1 263. When the news broke in January 2019 that Facebook’s Research apps were repackaged
2 Onavo apps designed to spy on users, Facebook immediately withdrew the programs from the Apple App
3 store.

4 264. Apple again concluded that Facebook had tried to violate its policies. Using Apple’s
5 Enterprise Developer Program, which allows the installation of a certificate or policy that provides root
6 access to an iPhone or iPad, Facebook obtained a level of administrative privilege designed for a
7 company’s internal IT department. Thus, using a system that allowed organizations to manage their
8 internal mobile devices, Facebook provided its spyware super user access to regular people’s iPhones and
9 iPads. Apple balked at the abuse. An Apple spokesman stated:

10 We designed our Enterprise Developer Program solely for the internal
11 distribution of apps within an organization. Facebook has been using their
12 membership to distribute a data-collecting app to customers, which is a
13 clear breach of their agreement with Apple. Any developer using their
14 enterprise certificates to distribute apps to consumers will have their
15 certificates revoked, which is what we did in this case to protect our users
16 and their data.

17 265. U.S. Senator Mark Warner immediately called for new legislation to prevent the sort of
18 abuse which Facebook had engaged in. U.S. Senator Richard Blumenthal issued a fierce statement
19 rebuking Facebook’s repackaging of the Onavo spyware app as “research”: “Wiretapping teens is not
20 research, and it should never be permissible.”

21 266. In addition to Onavo’s Protect app, Facebook has attempted to deploy its surveillance
22 software as other forms of utility applications that require extensive or privileged access to mobile
23 devices. For example, Facebook released the Onavo Bolt app, which locked apps behind a passcode or
24 fingerprint while it covertly surveilled users—and sent Facebook the results. Facebook also shut that app
25 down the very day that its surveillance functionality was discovered. The Onavo Bolt app had been
26 installed approximately 10 million times.

27 267. Facebook continues to possess Onavo’s code base and is likely, as it has done before, to
28 repackage its surveillance software into yet another app. Facebook can also easily incorporate
surveillance code into any of its mobile applications that enjoy massive installed bases and reach,

1 including Instagram and WhatsApp. If left undeterred, Facebook will likely continue leveraging the
2 surveillance software, infrastructure, and analysis that it acquired as part of its acquisition of Onavo.

3 **B. Facebook Identifies Instagram as a Threat and Acquires the Company**

4 268. Data from Onavo reported a significant threat on the horizon likely as early as 2011 (and
5 certainly by 2012): a photo-sharing mobile application called Instagram. That app had its origins when
6 founder Kevin Systrom, then 27, learned to code over nights and weekends. Systrom developed an app
7 called Burbn, which allowed users to check in, post plans and share photos. The photo sharing feature
8 immediately became the app's most popular.

9 269. After meeting venture capitalists from Baseline Ventures and Andreessen Horowitz,
10 Systrom received \$500,000 of funding. Systrom soon after met co-founder Mike Krieger—then 25 years
11 old—who focused on the user experience of the app.

12 270. Seeing the positive reception to the photo sharing aspect of the Burbn app, Krieger and
13 Systrom decided to pivot their business to focus on that feature. They studied their rivals in the category,
14 including an app called Hipstamatic, which included photo-editing features, including the ability to add
15 filters to photos. Hipstamatic, however, had no social capabilities.

16 271. Seeking to bridge the gap between Hipstamatic photo features and Facebook's elements,
17 Systrom and Krieger stripped Burbn down to its photo, comment, and like capabilities. They then
18 renamed the app Instagram, containing the words "instant" and "telegram."

19 272. Systrom and Krieger worked tirelessly to polish the user experience of their new
20 application, designing Instagram to streamline the process of taking photos on mobile devices and
21 uploading them to a social platform. The app had a minimalist focus, requiring as few actions as possible
22 from the user. After eight weeks of fine-tuning, the app entered its beta phase and the founders prepared
23 to launch it on iOS.

24 273. On October 6, 2010, Instagram launched on iOS. That very day it became the top free
25 photo-sharing app on Apple's App Store, racking up twenty-five thousand downloads. Instagram's
26 founders were stunned at the response. As Systrom noted after the launch: "First off, we have to say that
27
28

1 we never expected the overwhelming response that we've seen. We went from literally a handful of users
2 to the #1 free photography app in a matter of hours.”

3 274. By the end of the first week, Instagram had been downloaded 100,000 times, and by mid-
4 December 2010, its total downloads had reached one million. The timing of the app was impeccable, as
5 the iPhone 4, with its improved camera, had launched just a few months earlier in June 2010.

6 275. With Instagram on the rise, investors clamored for a stake. In February 2011, Instagram
7 raised \$7 million in Series A funding from a variety of investors, including Benchmark Capital, which
8 valued the company at around \$25 million. In March 2011, Jack Dorsey, the CEO of Twitter, pursued the
9 idea of acquiring Instagram, and Twitter made an offer of approximately \$500 million dollars for the
10 company. Systrom declined.

11 276. By March 2012, the app's user base had swelled to 27 million. That April, Instagram was
12 released on Android phones and was downloaded more than one million times in less than one day. At
13 the time, the company was also in talks to receive another \$500 million funding round.

14 277. Internally, Facebook carefully tracked Instagram's meteoric rise, including through the
15 intelligence it received from Onavo's data collection. Instagram clearly posed a competitive threat to
16 Facebook's dominant position, including in the rapidly expanding market for mobile-based social
17 applications.

18 278. Unlike Instagram's streamlined approach to photo sharing, Facebook's photo-sharing was
19 onerous. As Facebook internally recognized, mobile devices were changing how users uploaded and
20 shared photos and it was causing severe problems for Facebook's business. As an internal Facebook
21 presentation explained:

22 Before phones, people would take their digital cameras out for special
23 events, vacations, etc. Then, they would post a bunch of photos at once—
24 after uploading them to their computer. With phones, people take and share
25 more photos more often. They share them individually (rather than waiting
26 to upload a bunch at once).

27 279. This resulted in a large drop in bulk photo uploads on Facebook's core social networking
28 product—a 29% decline from 2012 to 2014. Facebook also observed that text posts were “tanking” 26%

1 because of “migration to phones with cameras.” The data was clear—Facebook had to shut down the
2 looming threat from the new photo-sharing app. If Facebook did nothing, Instagram’s user base would
3 imminently eclipse Facebook’s at its current growth rate, eroding and perhaps even destroying
4 Facebook’s DTBE. An independent app with no ties or reliance on Facebook, Instagram could become
5 not only a competing mobile-based social app, but a social network unto itself that could rival Facebook
6 in the amount of engagement and social data it could produce and monetize.

7 280. In February 2012, Zuckerberg discussed the potential acquisition of Instagram with
8 Facebook Chief Financial Officer, David Ebersman. Zuckerberg explained that he had “been thinking
9 about . . . how much [Facebook] should be willing to pay to acquire mobile app companies like
10 Instagram . . . that are building networks that are competitive with our own.” Mr. Zuckerberg told Mr.
11 Ebersman that these “businesses are nascent but the networks are established, the brands are already
12 meaningful and if they grow to a large scale they could be very disruptive to us.”

13 281. In response, Ebersman asked Zuckerberg whether the goals of the acquisition would be
14 to: (1) neutralize a potential competitor; (2) acquire talent; or (3) integrate Instagram’s product with
15 Facebook’s to improve its service. Zuckerberg replied that the purpose of the transaction would be to
16 neutralize Instagram, saying that the goals of the deal were “a combination of (1) and (3).” He explained:

17 One thing that may make (1) more reasonable here is that there are network
18 effects around social products and a finite number of different social
19 mechanics to invent. Once someone wins at a specific mechanic, it’s
20 difficult for others to supplant them without doing something different. It’s
21 possible someone beats Instagram by building something that is better to
the point that they get network migration, but this is harder as long as
Instagram keeps running as a product.

22 282. Zuckerberg quickly understood that Instagram’s meteoric rise was a threat to Facebook’s
23 entire business. With a ready-made network of users, Instagram’s dominance of one of the “mechanics”
24 fueling Facebook’s engagement would mean the disruption of the DTBE protecting Facebook. If
25 Instagram took away engagement from Facebook, Facebook would lose some of its ability to target users
26 for content and to advertise to them, which in turn meant less engagement. The virtuous circle would
27 reverse itself.
28

1 283. As Zuckerberg himself put it:

2 By a combination of (1) and (3), one way of looking at this is that what
3 we're really buying is time. Even if some new competitor springs [sic] up,
4 buying Instagram, Path, Foursquare, etc [sic] now will give us a year or
5 more to integrate their dynamics before anyone can get close to their scale
6 again. Within that time, if we incorporate the social mechanics they were
7 using, those new products won't get much traction since we'll already have
8 their mechanics deployed at scale.

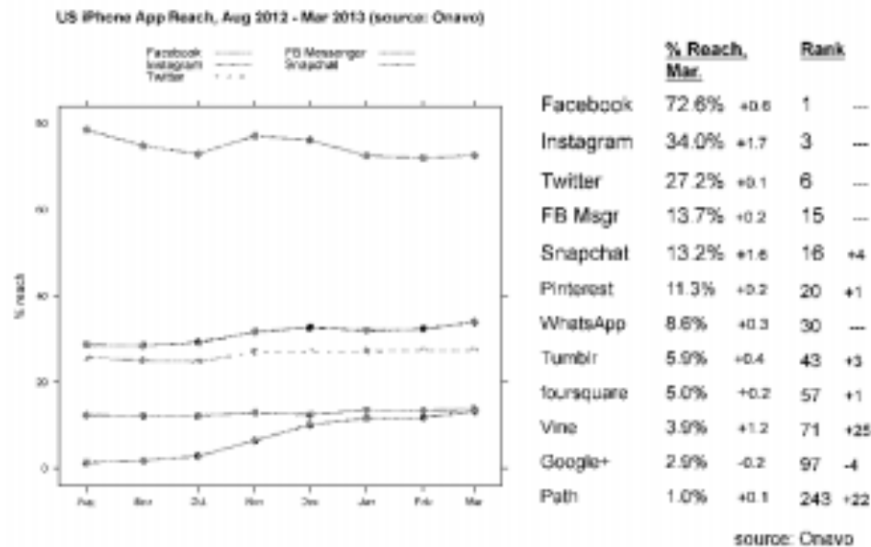
9 284. It was clear to Zuckerberg that what he was "really buying is time," as eventually a
10 competitor would emerge that threatened Facebook's DTBE and dominance over its walled garden.
11 Zuckerberg continued the discussion through March 2012, telling Mike Schroepfer, Facebook's Chief
12 Technology Officer, that acquiring Instagram would provide the company with "[i]nsurance" for
13 Facebook's main product. Schroepfer agreed, responding that "not losing strategic position in photos is
14 worth a lot of money." He added that the "biggest risk" would be if Facebook were to "kill" Instagram
15 "by not investing in the company and thereby opening a window for a new entrant."

16 285. In a message to another Facebook employee on April 5, 2012, Zuckerberg said that
17 "Instagram can hurt us meaningfully without becoming a huge business." In contrast, he did not view
18 other smaller firms, such as Pinterest and Foursquare, as imminently dangerous competitive threats. As
19 he noted, if these companies "become big we'll just regret not doing them . . . Or we can buy them then,
20 or build them along the way." In an all-hands meeting the following day, Mr. Zuckerberg responded to a
21 question about Instagram's rapid growth by saying that "we need to dig ourselves out of a hole." He also
22 told employees at the company that Instagram is "growing really quickly" and that it would be "tough to
23 dislodge them."

24 286. After direct talks with Mark Zuckerberg, Facebook made Instagram an offer to purchase
25 the company for \$1 billion in April 2012, with the express promise that the company would remain
26 independently managed. Facebook consummated the deal immediately prior to its IPO.
27
28

287. Facebook's own Onavo data, which was obtained and published by BuzzFeed, made clear that Instagram posed an existential threat to Facebook. By February 2013, Instagram had grown to 34% of the total user reach among all social apps.

US mobile apps (iPhone)

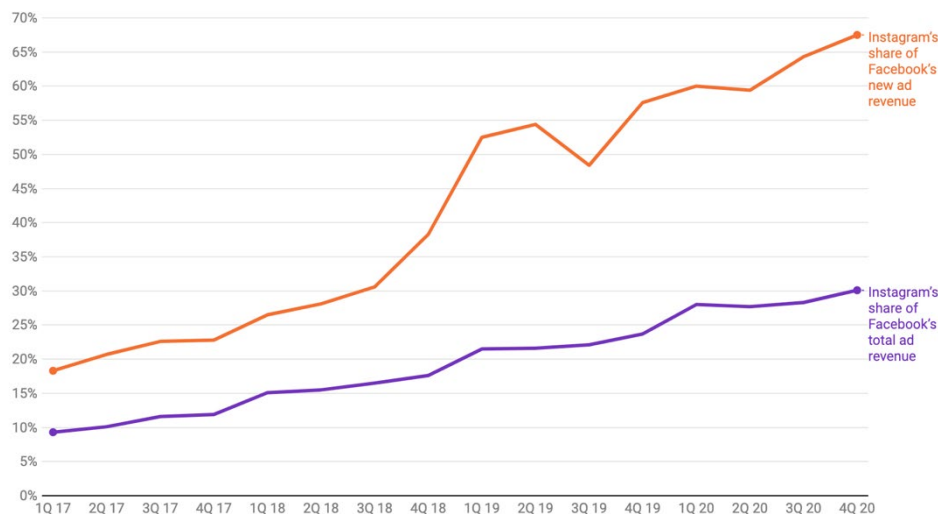


288. With its Instagram acquisition, Facebook's share of mobile photo sharing app users ballooned as Facebook added Instagram's 34% user reach to Facebook's own 72% user reach.

289. Although Instagram had not at the time of the merger meaningfully monetized its user engagement and social data, Facebook quickly did so. By the end of 2013, Facebook had begun showing ads on Instagram. Since then, Instagram has become an ever-increasing proportion of Facebook's advertising revenue and a large share of Facebook's user growth.

290. In 2017, Instagram generated \$2 billion, or about 15 percent, of Facebook's \$13 billion in ad revenue.

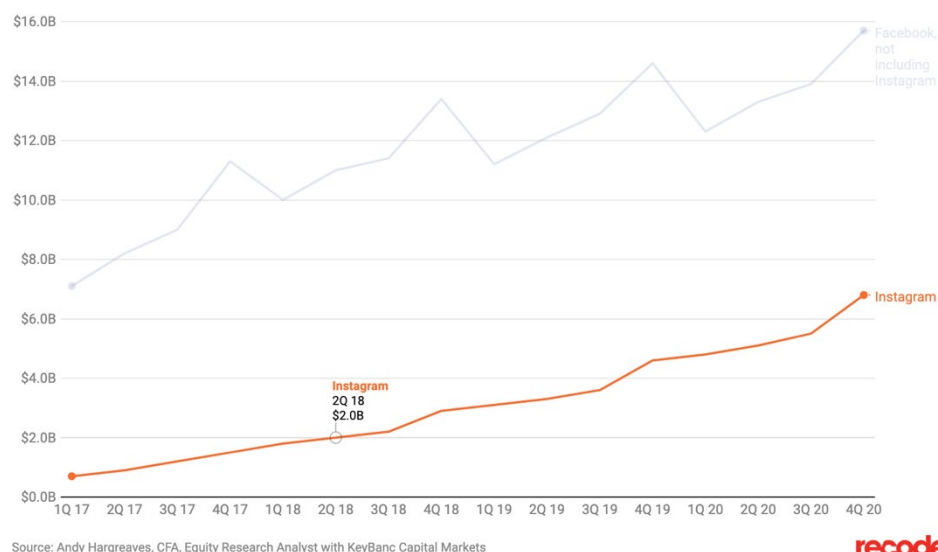
Instagram's estimated share of Facebook's ad revenue and growth



291. By the end of 2018, Instagram had a billion users and was estimated to generate \$8 billion to \$9 billion in revenue for Facebook in 2018.

292. Instagram also accounts for the bulk of Facebook's new revenue since the acquisition.

Facebook and Instagram's estimated quarterly ad revenue



1 293. Instagram allowed Facebook to grow its social network as Facebook's desktop and core
2 mobile application began to stagnate. Together, Facebook and Instagram captured and monetized the
3 social data generated across both apps.

4 294. The Instagram acquisition ensured that Instagram could not become a rival social network
5 that could generate enough social data to erode the DTBE protecting Facebook's business. It also ensured
6 that Instagram could not build and grow its own developer platform, which would threaten Facebook's
7 scheme to dominate the Social Advertising Market by denying and/or leveraging social-data dependent
8 applications' access to essential functionality. The acquisition accordingly also ensured that Facebook
9 rivals required to enter into Whitelist and Data Sharing Agreements had no other platform choice—and
10 thus no option but to hand over their social data to Facebook. Finally, the acquisition ensured that
11 Instagram could not sell highly targeted advertising in the Social Advertising Market, which would mean
12 there would be a material check on Facebook's ability to raise prices.

13 295. At the time of its IPO in 2012, Facebook struggled to grow its mobile product, let alone
14 to meaningfully monetize the social data it collected through advertising. By 2019, Facebook had
15 achieved an 83% share of the Social Advertising Market by leveraging its Instagram mobile application
16 and its Facebook mobile and desktop applications. No other company comes close in market share.

17 296. Instagram was instrumental to Facebook's explosive growth in the Social Advertising
18 Market. From the fourth quarter of 2010 until the first quarter of 2011, Facebook's revenue was flat.
19 From 2011's holiday cycle to 2012's opening three months (right before its IPO), Facebook actually
20 *shrank*. Facebook then experienced a sudden reversal after its acquisition of Instagram, as mobile revenue
21 began to account for a significant share of revenues, and Instagram allowed Facebook to grow with the
22 rise of mobile applications.

23 297. Notably, Facebook's acquisition of Instagram also allowed Facebook to exclude third-
24 party apps that provided photo and video sharing functionality from its Platform. If an image sharing or
25 video app contained an important feature, Facebook cloned it, thus paving the way for excluding a
26 competitive rival from its Platform, while simultaneously taking away that rival's share of users.

298. For example, when Snap, the maker of the app SnapChat, rejected Zuckerberg and Facebook’s \$3 billion offer to purchase the company and its product, Facebook flagrantly copied key features from Snap and built it into its Instagram product. Thus, when the SnapChat’s “stories” feature—which allows a user to post a connected series of images and video—rapidly grew in popularity, Instagram simply cloned it. By late 2016, Instagram had launched a product that mooted one of Snapchat’s most popular features.

299. Facebook’s own clunky mobile app’s clone of the “stories” feature did not have nearly the same traction with users. It was Instagram that provided Facebook the platform to compete head-on with a looming threat among social photo- and video-sharing apps. Without Instagram, Facebook would have faced direct competition. Instead, it leveraged Instagram to obtain and maintain its dominance among social mobile apps and the lucrative social data they generated.

300. Put simply, the acquisition of Instagram dramatically increased Facebook’s market share of the Social Advertising Market and strengthened the DTBE protecting Facebook’s business.

C. Facebook Acquires WhatsApp

301. In February 2009, Jan Koum and Brian Acton left Yahoo and founded a new company called WhatsApp. Koum had an idea for a mobile application that displayed user statuses in an address book on a smartphone—indicating, for example, whether a user was on a call, had low battery, or was at the gym. The pair enlisted the help of a Russian developer, Igor Solomennikov, to build the app. Koum spent days writing backend code for the app to allow it to sync with any phone number in the world.

302. Although the app—named WhatsApp—was initially unsuccessful, a June 2009 development changed everything. That month, Apple introduced “push notifications” for iPhone, allowing developers to ping app users even when they weren’t using the app. Koum immediately updated WhatsApp to ping a user’s entire network of friends when their status changed.

303. The feature eventually became a form of instant messaging. Because messages sent through WhatsApp instantaneously notified other users even if the phone was not running the app in the foreground, it became ideal for broadcasting messages to connections within a user’s social network, which was built on their phone’s contact list.

1 304. At the time, WhatsApp's only significant competition for this sort of instant messaging
2 was BlackBerry's BBM—which was exclusive to BlackBerry's proprietary hardware platform.
3 WhatsApp, on the other hand, tapped into the vast network of app-enabled consumer smartphones that
4 had emerged, particularly Apple's iPhone.

5 305. WhatsApp continued to innovate, including by introducing a double checkmark that
6 showed when a message was read by another user. Wanting more from text messaging, including the
7 limited MMS protocol used by cellular networks, WhatsApp set out to build a multimedia messenger
8 system to send messages across a social network in real time to mobile devices.

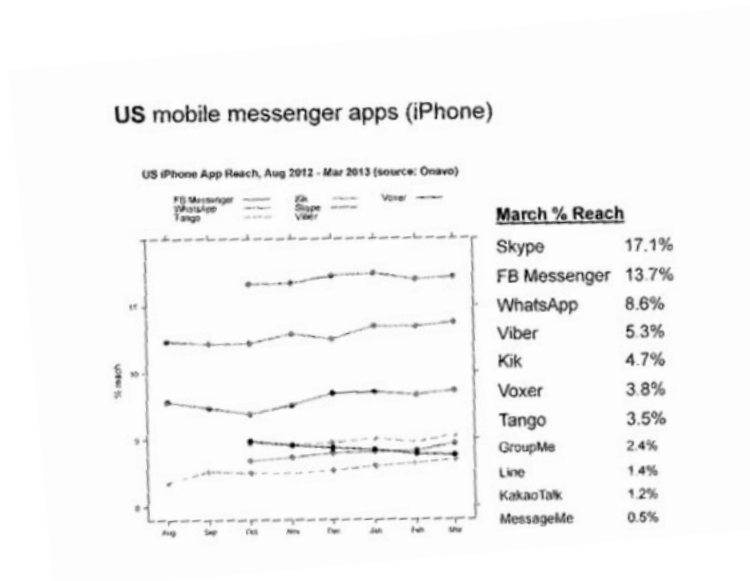
9 306. Because WhatsApp's messaging used the mobile phone's Internet connection rather than
10 text messages, the app allowed users to avoid text messaging fees entirely. In some countries, text
11 messages through cellular providers were metered. WhatsApp's ability to send messages to any user with
12 a phone using the Internet was its most sought-after feature.

13 307. In December 2009, WhatsApp updated its app for the iPhone to send photos. User growth
14 spiked, even when WhatsApp charged users for its service. Having created a unique combination of image
15 and messaging apps as one socially powered app, WhatsApp decided to stay a paid service and grew
16 while generating revenue.

17 308. By early 2011, WhatsApp was one of the top twenty paid apps in Apple's U.S. App Store.
18 The company attracted the attention of venture capital firm Sequoia, and WhatsApp agreed to take \$8
19 million of additional funding in addition to its original \$250,000 seed funding.

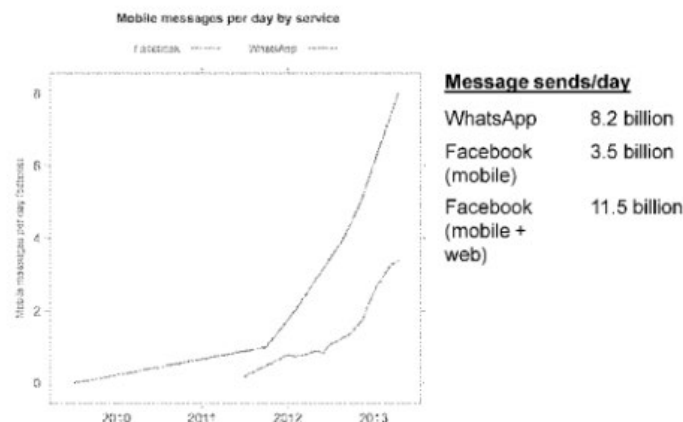
20 309. Two years later, in February 2013, WhatsApp's user base had ballooned to 200 million
21 active users. That month, WhatsApp raised additional funds—another \$50 million from Sequoia, at a
22 valuation of \$1.5 billion.

310. Internally, Facebook had carefully tracked WhatsApp's rapid rise. Engagement data from Facebook's Onavo spyware reported that WhatsApp was rivaling Facebook's own Messenger product and held third place in terms of user reach among mobile messenger apps for iPhone in the U.S. as of April 2013.



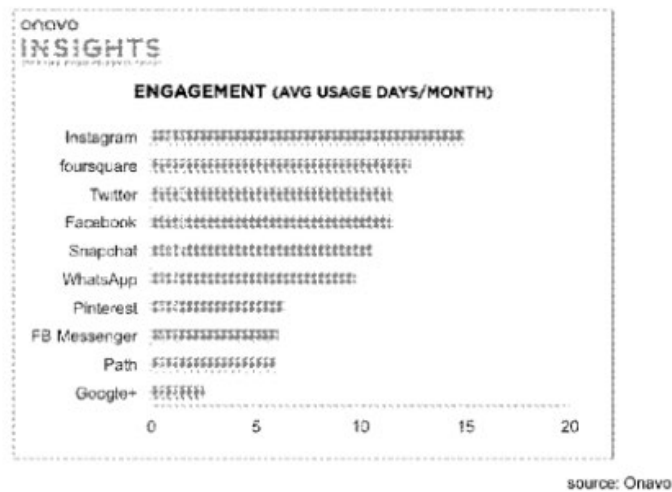
311. The broader picture was even more threatening to Facebook. As BuzzFeed reported, Onavo had tracked messages sent through WhatsApp and the number dwarfed Facebook's own mobile product by more than twofold.

WhatsApp message sends



312. The same Onavo data reported by BuzzFeed showed massive engagement among WhatsApp users, placing it in sixth place behind Facebook's own core product; Facebook's newly acquired Instagram; Twitter; Foursquare; and Snapchat.

US mobile apps (iPhone only)



313. WhatsApp, although lacking Facebook's market reach, was drawing from the same pool of limited attention. Given Facebook's own fledgling Messenger App, WhatsApp exposed a massive vulnerability in Facebook's business model. WhatsApp was built on a social network derived directly from a smartphone user's contact list. It did not require Facebook's graph network for growth and could not therefore be shut down by revoking access to Facebook's APIs. Nor could Facebook demand that WhatsApp enter into a Whitelist and Data Sharing agreement.

314. WhatsApp posed a direct threat to Facebook's business, including the DTBE protecting its dominance. WhatsApp allowed for statuses, image sharing, and texting—all of the principal features of Facebook's core products. By 2013, the size of WhatsApp's network and the user engagement in that network made WhatsApp the most direct threat to Facebook's market dominance—and because of Onavo, Facebook knew it.

315. To ensure that it maintained its DTBE, and thereby its dominance of the Social Advertising Market, Facebook sought to remove WhatsApp as a competitor. As the *Wall Street Journal* reported, Facebook's Vernal internally commented in 2013: "Whats App launching a competing platform is

1 definitely something I'm super-paranoid about." Vernal understood that if WhatsApp created a rival
2 platform, Facebook's own scheme to exclude rivals by leveraging its Platform would fail—developers
3 would migrate to the competing platform provided by WhatsApp.

4 316. Internally, Facebook's management team discussed the WhatsApp threat with urgency.
5 Facebook Director of Growth Javier Olivan wrote in an internal e-mail that WhatsApp had higher levels
6 of reach and usage than Facebook in countries that it had penetrated. For example, based on Facebook's
7 internal data, WhatsApp reached 99.9% of the smartphone population in Spain, or as Mr. Olivan
8 described it, "literally everyone." By purchasing WhatsApp, Olivan suggested that they could "grow
9 Facebook even further" by exposing new users to Facebook. Additionally, by bundling free services with
10 WhatsApp and Facebook's other services, the transaction could serve as another mechanism to expand
11 Facebook's reach among WhatsApp users. Zuckerberg responded, "I really agree with this analysis."

12 317. In an email to Facebook's CFO, David Ebersman, Olivan wrote that WhatsApp's "reach
13 amongst smartphone users is actually bigger than ours . . . we have close to 100% overlap, our user-base
14 being a subset of theirs." He explained that "in markets where they do well, they literally reach 100% of
15 smartphone users—which is a big part of the population."

16 318. On December 13, 2013, Zuckerberg wrote to his management on competitive issues facing
17 the company. WhatsApp was among them:

18 I want to call out two competitive near term issues we face. The first is
19 WhatsApp adding a feature like this for public figures . . . If the space is
20 going to move this direction, being the leader and establishing the brand
21 and network effects matters a lot. This alone should encourage us to
22 consider this soon. . . . When the world shifts like this, being first is how
23 you build a brand and network. We have an opportunity to do this at scale,
24 but that opportunity won't last forever. I doubt we even have a year before
25 WhatsApp starts moving in this direction.

26 319. Using Onavo data, Facebook's data scientists modeled WhatsApp's growth, particularly
27 its engagement and reach, to determine whether it was "killing Facebook messenger," as well as how its
28 usage trends compared to Snapchat.

1 320. Knowing about WhatsApp’s size, its engagement, and its unique potential to erode the
2 DTBE protecting Facebook market dominance, Facebook moved aggressively to remove this existential
3 threat from the competitive landscape. In late 2013, Facebook made an initial bid of \$16 billion in stock
4 for WhatsApp. During negotiations in early 2014, Facebook raised its price to \$19.6 billion—adding \$3.6
5 billion to the original price as compensation to WhatsApp employees for staying on board at Facebook.
6 When all was said and done, Facebook ultimately paid close to \$22 billion for WhatsApp.

7 321. But for the value of containing and shutting down the growth of WhatsApp’s competing
8 social network and platform, the transaction made no possible economic sense to Facebook. WhatsApp’s
9 revenues were a meager \$10.2 million in 2013. Its six-month revenue for the first half of 2014 totaled
10 \$15.9 million, and the company had incurred a staggering net loss of \$232 million in that same period.
11 Facebook had paid twenty billion dollars—thousands of times WhatsApp’s revenues—to acquire a
12 money-losing company that created software functionality Facebook itself already had as part of its own
13 products, and could easily build from scratch for a fraction of the cost of the acquisition if it wanted to.

14 322. At the time of the WhatsApp acquisition, Facebook’s user reach and user base and
15 engagement was already massive—and unrivaled by any competing messaging app—but the addition of
16 WhatsApp’s user base further solidified Facebook’s dominance in the Social Advertising Market. More
17 importantly, however, Facebook had removed a serious threat to its DTBE. If WhatsApp and its nascent
18 social platform were allowed to compete on the merits, Facebook would not have been able to leverage
19 its Platform into continued dominance of the Social Advertising Market, including by using API access
20 to shut down competing third-party apps and to demanding access to other apps’ most valuable social
21 data as a condition for their existence.

22 323. Moreover, because the reach and engagement on WhatsApp generated (and generates)
23 significant social data that Facebook could (and can) leverage and monetize through its mobile
24 advertising channel, Facebook’s DTBE strengthened as a result of the WhatsApp acquisition, fortifying
25 Facebook’s unrivaled dominance in the Social Advertising Market, and strengthening Facebook’s ability
26 to exclude potential entrants to this market from gaining a foothold with a rival messaging or photo-
27 sharing app.

VII. THE THREAT BEYOND FACEBOOK'S WALLED GARDEN

324. Facebook's Platform strategy, coupled with its strategy of acquiring or outright cloning potential threats, significantly strengthened the DTBE and protected Facebook's business, but as Zuckerberg internally observed when deciding to acquire Instagram, what Facebook was "really buying [was] time." In fact, removing 40,000 mobile app developers from its Platform created a potential blind spot for Facebook.

325. To maintain its dominant position in Social Advertising, Facebook would have to ensure its ability to granularly target Facebook users. But because those users spent significant time outside of Facebook, including on mobile apps and web applications, Facebook needed to effectively harvest social data from them even when they were not on Facebook. And, to maintain the competitive edge it enjoyed from its DTBE, Facebook would have to extend its ability to target users outside of its walled garden.

A. Facebook Audience Network

326. Facebook announced a new advertising system at the 2014 F8 conference in April of 2014 called the Facebook Audience Network ("FAN"). FAN allowed developers to target both standard banners and custom ad units using Facebook's vast trove of personal data. Advertisers would be able to buy ad space in mobile applications through FAN, and developers could purportedly monetize their apps.

327. As TechCrunch reported ahead of the F8 announcement, FAN would allow advertisers to use Facebook's granular targeting system to advertise in mobile applications:

Facebook will also bring the ad targeting muscle, allowing advertisers to reach people based on biographical and interest data, and likely with cookie-based retargeting, too. Most other ad networks have a limited amount of data regarding who someone is, and that data is often inferred so it's not always accurate. That makes it tougher meaning to show relevant ads that get results and command high rates for publishers. *[sic]*

But Facebook's social network has convinced people to volunteer tons of deep personal information like work history, education, and favorite movies, plus it can see what apps they use and where they are. Since people stay logged into Facebook, FAN can recognize exactly who the viewer is and show them an ad matched to their profile.

328. Part of Facebook's focus was on developers, as they were Facebook's largest mobile ad customer because they sought new users through app installs. FAN would provide new forms of

advertising, including early forms of advertising “retargeting”—reengaging with a user after an ad impression or other event. As TechCrunch explained:

The ads themselves could promote a range of products. There’s sure to be plenty of app install ads, Facebook’s current cash cow, as developers are desperate for installs and willing to pay. Mobile app-reengagement ads could also be popular. You might already have Hotel Tonight installed, but have forgotten about it. If Facebook sees you like traveling, and just checked in to a restaurant in Los Angeles, it could show an ad delivered through FAN in another app that re-opens HotelTonight to a \$99 hotel room in the city. Big brands and local businesses might also get in on the action, as Facebook’s offline measurement tools can prove that its ads drive in-person sales.

329. Facebook was opening up an entirely new class of features—those dependent on tracking users across devices and apps.

330. FAN went live in October 2014, and what was launched was significantly broader than what Facebook had announced at F8. FAN was not released as a separate advertising stream. Instead, it was implemented as an extension of Facebook’s existing advertising system. This meant that a Facebook Ad, using Facebook’s granular targeting systems, could be used to target ads outside of Facebook’s properties—directly in third-party, mobile apps.

331. TechCrunch covered the new functionality, explaining its significance:

Until now, each dollar Facebook earned meant annoying its own users with more ads. This created a natural cap on Facebook’s revenue unless it wanted to pester us so much that we stopped visiting. Now it can sit back and cash in on all the targeting data it’s collected.

332. Facebook had created finely tuned machine-learning systems to target users by, among other things, biographical and interest-based information it had collected about them as they interacted with other Facebook users. Those machine-learning algorithms would now be turned loose outside of Facebook’s walled garden, allowing them to granularly target and track Facebook’s users even when they were using someone else’s mobile application.

333. The value of this new functionality was not just the ability to display ads on mobile applications that Facebook did not control—it also provided Facebook more critical user data, particularly

1 social data, which its machine-learning algorithms needed as fuel. Facebook would be able to learn more
2 about its users, including how they interacted with other users and content outside of Facebook,
3 Instagram, or WhatsApp. This made Facebook better at serving both content and advertising to users
4 while on Facebook-controlled apps, reinforcing the DTBE.

5 334. Initially, Facebook's Login product, which it had promoted at F8 2014, was one of the
6 ways Facebook was able to track users across applications. Users who logged into a third-party app using
7 their Facebook login were then tracked by Facebook as they used those apps.

8 335. In May 2016, however, Facebook extended FAN even further, to track Facebook users
9 who were not even logged into Facebook. As Facebook explained in a blog article:

10 Over the coming months we will expand the reach of Facebook-powered
11 advertising on the Audience Network to include people who don't have
12 accounts. To ensure that the ads people see in the apps and websites in the
13 Audience Network are highly relevant, we will use information we receive
14 from third-party sites and apps that use Facebook technology.

15 336. On May 27, 2016, the *Wall Street Journal* reported that the change allowed tracking of
16 users across the Internet, positioning Facebook to compete head-on with Google:

17 To that end, the social network and online advertising company said
18 Thursday it will now help marketers show ads to all users who visit
19 websites and applications in its Audience Network ad network. Previously
20 Facebook only showed ads to members of its social network when they
21 visited those third-party properties.

22 The change is a subtle one, but it could mean Facebook will soon help to
23 sell and place a much larger portion of the video and display ads that appear
24 across the Internet. The change will also intensify competition with
25 Alphabet Inc. subsidiary Google, which dominates the global digital-
26 advertising market, and a wide range of other online ad specialists.

27 337. Facebook now planned to leverage its targeting systems outside its walled garden. It would
28 monitor users who were not logged into Facebook at all, allowing FAN to extend Facebook's edge beyond
the Social Advertising Market, which it had dominated by virtue of the DTBE protecting its business.

B. Facebook Acquires Atlas

338. On December 6, 2012, news broke that Facebook was considering acquiring a company called Atlas from Microsoft. Atlas was a software company that both served ads and tracked ad conversions.

339. For example, Atlas technology would log when a user viewed an ad that was served to them, and then if they later, for example, purchased a product (that is, the ad “converted”), Atlas technology would allow attribution of the sale to the advertisement.

340. Google had paid \$3 billion dollars for its own ad-serving product, DoubleClick, in 2007. Although Atlas lacked the sophistication of DoubleClick—particularly after Google had developed and integrated the DoubleClick software with its own—the purchase of Atlas positioned Facebook to grow and extend its capability to granularly target users with advertising well beyond Facebook’s own properties.

341. In Facebook’s hands, however, Atlas and its technology was even more valuable. As Business Insider explained in December 2012:

The value of a Facebook-powered/Atlas-supported ad network could be tremendous.

Here’s why.

Facebook is the only company in the world that has a billion email addresses, home addresses, and phone numbers on file.

This asset allows Facebook to do something no other Website can.

Facebook can tell marketers whether or not a Facebook user saw, on Facebook.com, an ad for a product before going to the store and buying it.

This is possible because retailers often have their shoppers’ phone numbers, home addresses, or email addresses on file. (They buy them from data collection companies.)

In the short term, Facebook will use this process to tell marketers exactly how much their sales increased thanks to ads on Facebook.com.

1 342. Acquiring software that could track conversions of Facebook ads outside of Facebook’s
2 walled garden was a powerful extension of Facebook’s targeting apparatus. It closed feedback loops for
3 events that occurred outside of Facebook’s view.

4 343. This ability, however, was about much more. Facebook’s DTBE stems both from the data
5 it harvests from its users and the power of its machine-learning models, which consume that data. As
6 users spend more time outside of Facebook’s properties, those machine-learning models have less to train
7 on, reducing the effectiveness of Facebook’s targeting. This in turn reduces engagement within Facebook,
8 and as a result, the value of its targeted advertising. Facebook understood this threat in the early 2010s,
9 with the rise of mobile apps. That is why it was—and remains—vital for Facebook to be able to track its
10 own users when they are not using the core Facebook product, Instagram, or WhatsApp.

11 344. At its purchase, Atlas already had the necessary functionality, allowing advertisers to plan
12 campaigns, buy ads on sites across the web, and measure their impact. It handled rich media and in-
13 stream video, display ads, and offered APIs for programmatic control.

14 345. Internally, Facebook saw Atlas as a means to massively increase Facebook’s targeting
15 capabilities. As Amin Zoufonoun, Facebook’s Vice President of Corporate Development, described to
16 Sheryl Sandberg when Facebook was considering the acquisition, it gave Facebook “immediate scale to
17 retarget, provide premium insights, do look-alike modeling, prove and measure efficacy of [Facebook]
18 as a marketing medium, [and] enhance customer audiences and associated revenue.”

19 346. Most importantly, it gave Facebook the ability to use identity-based targeting through
20 Facebook Identity—Facebook’s unique identifier for Facebook users across all browsers and devices—
21 to serve highly targeted ads. Indeed, Facebook had described the value of Facebook Identity as the ability
22 to “target people across browsers and devices” and to “[a]ctivate offline data to enrich online targeting,”
23 among other features.

24 347. On February 28, 2013, Facebook acquired Atlas for approximately \$100 million. In its
25 summary of the deal at the time of the transaction, Facebook noted that the transaction was an opportunity
26 to become the “buy-side desktop tool that media planners fire up first thing in the day” and to acquire “a
27
28

1 deep installed base of pixels which we can immediately turn on to power conversion tracking and
2 attribution across offerings.”

3 348. The latter was the most important. By pixels, Facebook was referring to embedded web
4 resources that would automatically pull information from a Facebook server when a user visited a non-
5 Facebook site. Sometimes, this would be done though an invisible, single-pixel image, which would
6 download from a centralized server. When the single-pixel image appearing on a third-party site was
7 downloaded by a user, Facebook would immediately know and would have the user’s browser
8 information, IP address, and device information as a result.

9 349. On September 29, 2014, Facebook announced through a blog post by Atlas’s Managing
10 Director Erik Johnson that Facebook had rebuilt Atlas “from the ground up,” meaning that it had
11 integrated it with its Facebook advertising systems. Facebook made the announcement ahead of
12 Advertising Week in New York City.

13 350. Although Facebook removed the blog post and announcement from its site, *Wired*
14 magazine contemporaneously recounted the focus of the announcement: unlike Google, Facebook would
15 not need Cookies to identify users; it had its own data and targeting systems, which it had trained and
16 honed using user interactions with its own properties:

17 In an apparent dig at Google, Johnson writes that the method advertisers
18 have traditionally used to track consumers—cookies—is flawed, because
19 consumers are no longer using one device at all times. “Cookies don’t work
20 on mobile, are becoming less accurate in demographic targeting and can’t
21 easily or accurately measure the customer purchase funnel across browsers
22 and devices or into the offline world,” Johnson writes. He offers “people-
23 based marketing,” that is, marketing based on Facebook’s data, as the
24 solution. It can not only track users between devices, but it can also connect
25 online campaigns to offline sales to determine how effective a given
26 campaign really was.
27
28

351. Johnson spoke at the Web Summit 2014 convention on its first day, November 4, 2014 (pictured below).



352. The focus of Johnson's Web Summit talk was identifying users across devices and throughout the Internet by using Facebook's user targeting technology:

If that email address corresponds to an email address you use on Facebook, we can now stitch together ads you've seen anywhere on the internet with a purchase you made in a store. Facebook has had this functionality for some time now, but with Atlas, we're able to take the cross-device, and the people-based and the offline-to-online story that Facebook has and move it to the rest of the internet.

353. Atlas gave Facebook the ability to leverage and extend its DTBE. Facebook could not only target users as they interacted on Facebook-controlled applications, but when they interacted with other apps and websites. This sharpened Facebook's own targeting across its properties.

C. Facebook Positions Itself Against Google by Combining Atlas, Audience Network, and Other Technology

354. By December 10, 2014, Facebook had acquired several key systems that positioned it to extend its targeting advantage beyond Facebook's products. In addition to Facebook Atlas and FAN, Facebook had also acquired LiveRail for approximately \$400-500 million.

355. LiveRail connected marketers to publishers on web and mobile to target seven billion video ads to visitors per month. It provided for real-time bidding, meaning that it dynamically matched

1 advertisement inventory with bids from marketers to optimize both revenue and effectiveness of that
2 advertising.

3 356. The technology Facebook acquired from LiveRail and Atlas, coupled with FAN, together
4 positioned Facebook to expand its dominance beyond its walled garden (Facebook's three primary
5 products—Facebook itself, Instagram, and WhatsApp). Facebook's advertising could reach beyond those
6 apps, tracking users across mobile devices and websites, and using information it gleaned from that
7 tracking to sharpen Facebook's targeting algorithms within its own products.

8 357. The press likened the combined assets to an "AdTech Voltron," a cartoon robot that
9 assembled a powerful robot out of smaller pieces:

10 Here's how the pieces come together.

11 Facebook brings its 1.35 billion users and massive engagement with the
12 News Feed where it shows its ads. Because its huge user base stays logged
13 in across web and mobile, it has a unified understanding of people's
14 identities in a way most platforms don't. Facebook's wealth of personal
15 data means it can target ads more accurately. For instance, it says it can
16 target gender with 90 percent accuracy compared to the online ad industry
17 average of 50 percent.

18 358. The combination of these properties reinforced Facebook's primary form of leverage in
19 the Social Advertising Market—its ability to granularly target users and to do so with significantly more
20 accuracy than any other competing product. By tracking Facebook users both inside and outside of its
21 walled garden, Facebook's targeting system was poised to span the Internet, mobile applications, and
22 Facebook's social applications, including Instagram and WhatsApp.

23 359. Through a combination of these assets, Facebook was able to create "Lookalike
24 Audiences," a new product announced in March 2013 that allowed Facebook to use its combined tracking
25 information to train its machine learning algorithms to serve ads more likely to "convert" or otherwise
26 result in desired feedback. Facebook could use a tracking pixel on a third-party site to find users within
27 its own applications similar enough to likewise convert on the same site.
28

1 360. Facebook itself provides an example on its website:

2 Say you're an online florist that wants to reach people similar to those that
3 made purchases on your website. Now you can use data from your
4 Facebook pixels (Facebook Conversion Pixel or the Custom Audiences for
5 Websites Pixel) to reach people who are most similar people who
6 previously made purchases on your website.

7 361. Facebook boasted that e-commerce company Shopify “saw a 2x decrease in cost per lead
8 when using lookalikes of their website visitors.”

9 362. The new method of targeting advertisements meant that Facebook’s machine learning was
10 becoming more powerful—capable of self-tuning ad campaigns to maximize their effectiveness. After
11 Facebook’s ads had run for a while, they would become more effective without the need for manual user
12 input. Facebook’s machine-learning algorithms would optimize not only the ad, but Facebook’s revenue.
13 All the while, Facebook’s algorithms would harvest more information from the users it tracked, allowing
14 it to further train its machine-learning models. This created a virtuous circle, expanding Facebook’s
15 targeting and trove of social data. The net result was a further strengthening of the DTBE.

16 **D. Shadow Profiles and Identifying Users Outside of Facebook’s Apps**

17 363. Facebook’s new strategy hinged on identifying its own users outside of Facebook’s apps.
18 By tracking those users outside of Facebook’s walled garden, Facebook became better at targeting them
19 within.

20 364. That is, by becoming better at serving content to users based on their web browsing or
21 mobile app usage, Facebook could lock users into its own apps, reducing the need for them to leave
22 Facebook apps while on the internet, which in turn made Facebook ads served to its own users
23 significantly more effective than other forms of advertising.

24 365. Facebook needed a way to keep track of what users did across mobile applications, its own
25 applications, and across the web. It did so by maintaining “shadow profiles” on users.

26 366. On April 16, 2018, after significant scrutiny before Congress, Facebook revealed the
27 sources of the shadow profile data it collects:
28

When does Facebook get data about people from other websites and apps?

Many websites and apps use Facebook services to make their content and ads more engaging and relevant. These services include:

- Social plugins, such as our Like and Share buttons, which make other sites more social and help you share content on Facebook;
- Facebook Login, which lets you use your Facebook account to log into another website or app;
- Facebook Analytics, which helps websites and apps better understand how people use their services; and
- Facebook ads and measurement tools, which enable websites and apps to show ads from Facebook advertisers, to run their own ads on Facebook or elsewhere, and to understand the effectiveness of their ads.

When you visit a site or app that uses our services, we receive information even if you're logged out or don't have a Facebook account. This is because other apps and sites don't know who is using Facebook.

367. Facebook confirmed its information gathering in its written answers to the United States Senate on June 11, 2018, admitting that Facebook collects extensive data even if a user is not logged into a Facebook account.

368. All of this meant that Facebook was uniquely poised to expand and leverage its position in the Social Advertising Market to challenge Google directly in online search and display advertising, where Google had long established a dominant position. As explained in the next section, Facebook never did so. Instead, it made an anticompetitive bargain with Google to preserve the Social Advertising Market—and Facebook's dominance within it.

VIII. FACEBOOK AND GOOGLE AGREE NOT TO COMPETE AND TO FORTIFY THE FACEBOOK-DOMINATED SOCIAL ADVERTISING MARKET

369. Although Facebook was poised to expand its advertising and targeting business beyond its social networking apps, it never meaningfully did so. Instead, as explained below, it made a bargain with Google that would help Facebook sharpen its machine-learning algorithms so that it could maintain

1 its superior ability to target its own users. In exchange, Facebook never challenged Google's dominance
2 outside of the Social Advertising Market.

3 **A. Google's Dominance Over Ad Exchanges and Ad Servers and the Looming**
4 **Facebook Threat**

5 370. As Facebook was taking its first steps outside of its walled garden, Google had already
6 achieved longstanding dominance in a form of advertising that allowed dynamic matching of display ad
7 inventory on websites and apps with marketers seeking to advertise to particular demographics.

8 371. Publishers provided their advertising inventory to Google's Ad Manager ("GAM"), which
9 would then either match that advertising inventory with a purchaser who had made a direct deal for
10 advertising or serve the available inventory to an ad exchange, where marketers bid for the inventory in
11 real time.

12 372. As an example, an online newspaper might have a space available on its site for an
13 advertisement. It would convey that information to an ad server, which would in turn find a buyer for the
14 space. In some cases, the ad server would send the available space to ad exchanges, which would sell the
15 ad space to the highest bidder.

16 373. By the mid-2010s, Google's ad server had become ubiquitous. Publishers, such as USA
17 Today, ESPN, CBS, Time, Walmart, and Weather.com, used (and still use) GAM. Today, GAM controls
18 over 90 percent of ad inventory from publishers.

19 374. Because most publishers use GAM to sell their inventory, Google serves as a middleman
20 to all the advertising exchanges, where bids from marketers are matched in real time with available
21 advertising inventory.

22 375. In addition to controlling the dominant ad server, Google also runs its own ad exchange,
23 called Google Ad Exchange or "AdX." Google charges an exchange fee for matching purchasers with ad
24 inventory, much of which comes through Google's dominant GAM.

25 376. Google's unique vantage point provides it with the ability not only to control the inventory
26 provided to exchanges, but to win bids against other ad exchanges.

1 377. That is, Google tracks website use through its analytics product. It tracks users on its Gmail
2 product. It tracks users when they use Google News. It even provides free DNS servers, resolving IP
3 addresses and web addresses for users across the internet. Google also has a unique vantage point because
4 of its mobile operating system, Android.

5 378. In recent years, Google's unique tools and properties have made it increasingly better-
6 suited to do what no other advertising exchange can do: identify who the person that visited a publisher's
7 website actually is, *i.e.*, their true, unique identity. Google's ad server and exchange are provided with
8 basic information about the person visiting the publisher's site, such as IP address, device identification
9 information, or browser information. Google's other tools and properties have increasingly positioned it
10 to do make granular identity determinations from this data.

11 379. In short, by the mid-2010s Google's advertising ecosystem was getting better and better
12 at doing something that Facebook had built its entire ad business upon, but could not outside of its own
13 properties—ascertain identity. (And, of course, Google could not, and cannot, serve ads to Facebook's
14 users on its properties.) By late 2016, with the rise of new technology and carefully targeted information
15 gathering properties like Android, Google's ad products threatened to encroach upon Facebook's
16 identity-focused ad targeting products—and indeed threatened to superset the Social Advertising Market
17 itself by allowing user and identity targeting outside of Facebook's social network.

18 380. As Google's capabilities increased, the prospect of a new, highly targeted form of
19 advertising emerged—one that could rival the effectiveness of buying advertising in the Social
20 Advertising Market, where Facebook was dominant and had unrivaled information about its users.

21 381. At the same time, Facebook became increasingly better in the mid-2010s at identifying
22 user identities and demographic information even outside of its own apps. Through Facebook's series of
23 acquisitions, it was able to target users with its advanced machine-learning, even if the users were not
24 logged into Facebook.

25 382. By 2018, Facebook was a threat to leverage its technology into Google's territory,
26 including by selling advertising in real-time in mobile applications and on the web. And Google's rapidly
27 growing prowess in discerning identity was an existential threat to Facebook's DTBE.
28

383. The two solved their problem by coming to an anticompetitive agreement code-named “Jedi Blue,” as explained later in this Complaint. However, to properly understand the true stakes and context of the once-looming clash of advertising titans, it is critical understand the role of AI and machine learning tools in online advertising—and how these tools were differently wielded by Google and Facebook in the run-up to their 2018 agreement to divide markets.

B. Google’s AI Dominance

384. Unlike Facebook, Google spent the 2010s becoming preeminent in machine learning and artificial intelligence. For example, Google acquired groundbreaking AI technology when it purchased UK-based DeepMind in January 2014 for more than \$500 million. And Google has leveraged this and other bleeding-edge machine learning technology throughout its entire ecosystem ever since.

385. Google’s machine-learning dominance has allowed it to leverage its large cross-section of user data across the Internet and mobile applications in increasingly powerful ways. For example, on December 14, 2016, Google announced that it had used DeepMind technology to make recommendations on its Google Play Store—Google’s mobile app store for Android devices. Google explained the problem and its AI-based solution on its AI blog:

Providing useful and relevant app recommendations to visitors of the Google Play Apps Store is a key goal of our apps discovery team. An understanding of the topics associated with an app, however, is only one part of creating a system that best serves the user. In order to create a better overall experience, one must also take into account the tastes of the user and provide personalized recommendations. If one didn’t, the “You might also like” recommendation would look the same for everyone.

Discovering these nuances requires both an understanding what an app does, and also the context of the app with respect to the user. For example, to an avid sci-fi gamer, similar game recommendations maybe of interest, but if a user installs a fitness app, recommending a health recipe app may be more relevant than five more fitness apps. As users may be more interested in downloading an app or game that complements one they already have installed, we provide recommendations based on app relatedness with each other (“You might also like”), in addition to providing recommendations based on the topic associates with an app (“Similar apps”).

1 One particularly strong contextual signal is app relatedness, based on
2 previous installs and search query clicks. As an example, a user who has
3 searched for and plays a lot of graphics-heavy games likely has a
4 preference for apps which are also graphically intensive rather than apps
5 with simpler graphics. So, when this user installs a car racing game, the
6 “You might also like” suggestions includes apps which relate to the “seed”
7 app (because they are graphically intense racing games) ranked higher than
8 racing apps with simpler graphics. This allows for a finer level of
9 personalization where the characteristics of the apps are matches with the
10 preferences of the user.

11 386. Google thus tackled a problem Facebook had solved socially (with actual social data), but
12 did so in a different way—by using complex machine learning that did not require social signals to make
13 social evaluations and recommendations. Rather than collecting actual friend recommendations and
14 activity, Google used machine learning—*i.e.*, deep neural network models—to study a user’s decisions
15 and preferences, then identified that other apps that might interested that user.

16 387. Facebook, on the other hand, had monetized app installs for years—Facebook’s “cash
17 cow”—by using its social targeting systems to traverse its network and coax other users to install apps
18 using social connections. Facebook used social data, data about its users’ interactions within its social
19 network, to devise and train machine-learning algorithms that would make predictions about who would
20 be interested in installing an app.

21 388. It was this “recommendation engine” technology that was at the center of Zuckerberg’s
22 concerns about Tinder during Facebook’s early 2010s API scheme. Indeed, in January 2014, Zuckerberg
23 was concerned that “recommendations seems like something that should be right up our alley,” but was
24 “something we’re not very good at.” He found Tinder’s growth “alarming” because its recommendation
25 engine was “built completely on Facebook data” and was “much better than anything we’ve built for
26 recommendations using the same corpus.”

27 389. But as Facebook sought to expand its machine-learning capability outside of its walled
28 garden, it faced a Google that was far ahead of it in the field of artificial intelligence and machine learning.
This meant that Google was better at identifying users, and if left unchecked, would be better at targeting
Facebook’s own users throughout the Internet, including on mobile applications.

C. The Rise of Header Bidding and Facebook’s Threat to Compete with Google

390. By 2016, a competitive collision between Facebook and Google looked imminent. Facebook was well positioned to move into the ad exchange business, and Google was poised to break Facebook’s dominance over granular, identity-based ad targeting, including within long-siloed social networks such as Facebook, Instagram, and WhatsApp.

391. The threat of competition heightened in 2015 and 2016 when publishers began to adopt a practice called “header bidding.” Header bidding routed ad inventory to multiple neutral exchanges each time a user visited a web page in order to return the highest bid for the inventory.

392. That is, publishers could send a standardized header to several exchanges, which included information about the advertising slot and the visiting user, and bidders on the exchanges could within milliseconds place bids for that advertising slot.

393. The new header-bidding technology threatened to cut Google out of the picture. Not only did header bidding undermine Google’s ad server, which had routed advertisements to the exchanges, it also eroded Google’s ability to front-run third-party ad exchanges by giving its own ad exchange an information advantage.

394. Google created its own alternative to header bidding, called Open Bidding, which among other things, allowed Google an advantage over other exchanges, including by charging a penalty fee when an ad was sold on a non-Google exchange.

395. Google aggressively sought to quell the threat of header bidding, but the threat became existential when Facebook threatened to adopt header bidding. In March 2017, Facebook publicly announced it would support header bidding, including in connection with FAN. At that time, when bidding into Google’s ad server, networks such as Facebook’s FAN had to bid into exchanges and pay exchange fees. By adopting header bidding, Facebook would let web publishers, mobile app publishers, and advertisers avoid Google’s exchange fees altogether. They could simply header bid to the exchanges, including through Facebook’s valuable FAN.

396. This was viewed as a direct attack on Google’s supremacy. Ad Age reported as much on March 22, 2017:

Facebook just executed what might best be described as a digital advertising coup against rival Google and its DoubleClick empire.

The social media power said Wednesday that it's bringing advertiser demand from its Audience Network to mobile web publishers that use header bidding.

Mobile publishers have been able to tap demand from Facebook Audience Network until now so long as they didn't use header bidding technology, a system that allows them to take bids from multiple buyer pools all at once. But if they wanted to capitalize on header bidding, they had to forgo any demand in FAN.

Now publishers that used header bidding and want to tap advertisers coming through FAN can do so through Facebook technology partners Index Exchange, Sonobi, Amazon Publisher Services, AppNexus, Media.net and Sortable. They can also access FAN through open-source solutions PreBid and PubFood, the company said.

397. As Ad Age observed, the move meant that Facebook's preeminent, identity-based targeting system could now be leveraged across the internet:

Publishers like the Washington Post, Daily Mail and Forbes have been quietly working with Facebook to introduce the offering, which gives them the ability to plug into FAN and receive ads bought through Facebook's sophisticated data and targeting technology.

398. Facebook's move had been part of a long-term strategy to draw in Google. Facebook's gambit worked, and Google reached out to Facebook to broker a deal.

D. Google Agrees to Help Facebook Identify Facebook's Own Users Outside of Its Walled Garden, and Facebook Backs Off of Programmatic and Exchange-Trade Advertising

399. Within months of Facebook's official header bidding announcement, Google and Facebook began formal negotiations. By August 2018, the companies were in heated negotiations, with each company internally evaluating contingencies and strategies if no deal could be reached.

400. In September 2018, the companies finally reached an agreement—an anticompetitive one. The agreement was code-named Jedi Blue.

401. Facebook agreed to back off its support of header bidding, leaving Google's dominant position over exchange-based advertising intact.

1 402. In exchange, Google agreed to give Facebook what it needed—a means to track its own
2 users when outside of Facebook-controlled apps.

3 403. As part of the agreement, Facebook would pay Google a 5 to 10% transaction fee and
4 would be locked into spending \$500 million annually on Google’s exchange-based systems.

5 404. Facebook, in return, would keep its control over the Social Advertising Market. In fact,
6 because of the agreement, Facebook was able to ensure that Google’s targeting would not target
7 Facebook’s users, solidifying Facebook’s preeminence over advertising to users on its social networks.
8 In short, Facebook’s agreement with Google shored up Facebook’s DTBE within its walled garden at a
9 time when the very existence of a differentiated, Facebook-dominated Social Advertising Market was
10 under threat from advancements in programmatic advertising and tracking technology.

11 405. As reported by the *Wall Street Journal*, Google provided Facebook a series of concessions
12 to Facebook as part of Jedi Blue that ensured this. For example:

- 13 • Google would help Facebook recognize mobile and web users, particularly Facebook’s own users
14 as they used websites and third-party applications.
- 15 • Facebook would receive the right to show ads to 90% of the users it recognized as its own.
- 16 • Facebook would receive a 300 millisecond “timeout” to recognize its users and bid. Other
17 participants would receive a shorter, 160 millisecond timeout.

18 406. The threat of Facebook leveraging its targeting systems in Google’s space was quelled—
19 by agreement. In exchange, Google propped up the Social Advertising Market. Because Facebook could
20 identify its own users outside of its apps, Facebook could maintain a price premium when it sold
21 advertisements to those users. Facebook also received preference over those users, meaning bidders on
22 other exchanges would only get the remaining 10% of inventory, and even then, would have half the time
23 Facebook had to bid on that inventory.

24 407. Google handed Facebook control over advertising targeting Facebook users and users of
25 other Facebook-controlled apps. This meant that Facebook became the most valuable means of reaching
26 these users, including while using third-party apps or websites.

408. Without the agreement, Google's machine-learning and AI dominance would allow it to identify users, including Facebook's own users, and target them, eventually based on granular criteria. This would erode the DTBE protecting Facebook's Social Advertising Market and reduce the price premium Facebook could charge (and did charge) for reaching its users.

409. Because of Jedi Blue, Facebook's users remained uniquely Facebook's to advertise to. As a result, advertisers had to pay Facebook (at a premium) to advertise to those users using granular targeting, including demographic-based targeting. By reason of the Jedi Blue agreement, no fungible level of targeted advertising could (or did) emerge that could rival Facebook's ad products for its walled garden users.

410. The agreement also neutralized (or at least substantially delayed) the AI and machine-learning threat posed by Google. Although Google was able to determine the identity of users based on publisher-provided information and its own data collected throughout the Internet, it would not leverage that data to poach advertising sales from Facebook. Rather, Facebook would receive priority over advertisements to its own identified users—and would receive Google's help to identify those users. Instead of turning its technology against Facebook, Google used it to bolster Facebook's dominant position in the Social Advertising Market.

411. Put simply, Google and Facebook agreed to divide and segment markets, allowing Facebook to continue charging a significant price premium for its targeted advertising sold in the Social Advertising Market. The agreement also staved off competition that threatened Google's control over exchange-traded advertising throughout the Internet. Both competitors benefited. Competition did not.

IX. THE RELEVANT MARKET

412. Plaintiffs are consumers and purchasers in the relevant market at issue in this case—the Social Advertising Market. Plaintiffs are direct purchasers of advertising products from Facebook and were anticompetitively harmed as participants in the Social Advertising Market.

A. The Social Advertising Market

413. The Social Advertising Market is a submarket of online advertising, the latter of which includes banner ads, search-based ads, and advertising on social networks. Social advertising, however,

1 is not fungible or interchangeable with these other forms of online advertising. Indeed, social advertising
 2 allows advertisers to granularly target groups of users for ads by their attributes, including by the
 3 attributes of their networks.

4 414. Thus, because of the extensive ability to target advertisements to users on social media
 5 sites like Facebook, search and banner advertising are not reasonable substitutes.

6 415. Several relevant factors indicate that the Social Advertising Market is a distinct submarket
 7 of online advertising and more general advertising markets:

8 416. ***Industry or public recognition of the submarket as a separate economic entity.*** Social
 9 advertising is broadly considered to be distinct from other forms of advertising by market and industry
 10 participants. For example, the advertising company Outbrain describes the differences between social ads
 11 on its blog as follows:

12 Paid social ads are served via algorithms that define what the user might
 13 be interested in, based on past activity in their social accounts, such as likes,
 14 shares, and comments. Unlike search, which is a focused, goal-oriented
 15 activity, browsing on social is more relaxed. Think cat memes, vacation
 16 snaps, and fun quizzes. Nevertheless, the social platform has accumulated
 masses of data about every specific user, which can be leveraged to target
 specific audiences with ads that are likely to be of interest to them.

17 417. Outbrain explains that social ads are considered useful for a distinct purpose:

18 Social ads are best for targeting audience segments who may be interested
 19 in your product or services, based on a range of targeting criteria—location,
 20 age group, gender, hobbies, interests. Social networks, such as Facebook,
 have advanced targeting capabilities, which means you can fine-tune your
 targeting criteria to reach a very specific, high-quality audience.

21 418. Outbrain explains that search ads are different, as they “are great for targeting customers
 22 when they are already looking for you (*i.e.*, they search your company name or product), or if they are
 23 searching for a specific product, service, or piece of information that you can provide.” Outbrain also
 24 distinguishes social advertising from other forms of online advertising, like discovery advertising.

25 419. Moreover, providers of business statistics such as statista.com also provide information as
 26 to social media advertising as a distinct submarket of online and general advertising.

1 420. As another example, in March 2015, leading advertising publication AdAge referred to
2 Facebook's Custom Audience targeting, which is unique to social advertising, as "potentially different
3 and more special because they have this richer level of data."

4 421. Likewise, industry publication Marketing Land reported in an October 14, 2019 article
5 that media agency Zenith, which is owned by Publicis Media, predicted growth in the social media
6 advertising segment as distinguished from search and television advertising, with social media ads
7 coming in third behind television and paid search advertising.

8 422. On an October 23, 2012 earnings call, Facebook's COO Sheryl Sandberg said, "On the
9 question of where advertisers are, as I've said before, we are a third [thing]. We're not TV, we're not
10 search. We are social advertising, and I would say our clients are on different parts of that adoption
11 curve." Later, on a May 1, 2013 earnings call, Sandberg explained: "As I said before, the thing about
12 brand advertisers is that they got very used to TV, then they got very used to search, and we are a third
13 thing."

14 423. Even academic articles, including those published in the Journal of Advertising, have
15 analyzed the market for social media advertising as a distinct segment, with well-defined engagement
16 characteristics.

17 424. *The product's peculiar characteristics and uses.* Social advertising has a distinct purpose
18 from other forms of advertising. Social advertising has different applications than other forms of online
19 advertising. Namely, social advertising allows granular targeting based on user attributes, user interests,
20 and group attributes. Moreover, because of the detailed amount of information that can be collected about
21 users as they engage on social media platforms, social advertising can seek out other users with similar
22 behavioral characteristics.

23 425. Facebook, for example, describes its own targeting capabilities as follows:

24 Facebook ads can be targeted to people by location, age, gender, interests,
25 demographics, behavior and connections. You can also use more advanced
26 targeting tools like Lookalike Audiences, which lets you target people
27 similar to the people who already engage with your business, or you can
28 layer your targeting options to select a more specific audience.

1 426. Facebook allows advertisers to create Lookalike audiences. Thus, unlike search or other
2 forms of advertising where the ad is created and placed to reach a preexisting audience, Facebook is able
3 to algorithmically combine a subset of its users to fit an advertisement. This capability is unique to social
4 advertising.

5 427. As Facebook explains on its website:

6 When you create a Lookalike Audience, you choose a source audience (a
7 Custom Audience created with information pulled from your pixel, mobile
8 app, or fans of your page). We identify the common qualities of the people
9 in it (for example, demographic information or interests). Then we deliver
your ad to an audience of people who are similar to (or “look like”) them.

10 428. Because of the level of granular data Facebook collects from its users, it can provide
targeting flexibility like no other advertising medium. As Facebook explains:

11 You can choose the size of a Lookalike Audience during the creation
12 process. Smaller audiences more closely match your source audience.
13 Creating a larger audience increases your potential reach, but reduces the
level of similarity between the Lookalike Audience and source audience.
14 We generally recommend a source audience with between 1,000 to 50,000
15 people. Source quality matters too. For example, if a source audience is
made up of your best customers rather than all your customers, that could
16 lead to better results.

17 429. Social advertising is also marked by the ability to algorithmically refine advertising
18 targeting as users interact with the ads. For example, Facebook allows users to place a pixel on their
19 website that is pulled off Facebook’s servers when the site is accessed. Facebook is thus able to determine
20 the efficacy of ads run on Facebook once the user transitions to an advertiser’s own website. Over time,
21 Facebook’s advertising becomes more targeted and more effective in terms of particular advertising
22 goals, such as lead generation or online purchases.

23 430. Other social networks, such as Twitter, provide similar targeting abilities. Twitter, for
24 example, allows targeting based on location, language, device, age, and gender, but also allows for the
25 targeting of audience types, including algorithmically tailored and custom-created audiences.
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431. These targeting features, which are available on social advertising platforms, are not comparably available as part of other forms of online advertising, such as display and banner ads or search ads.

432. ***Unique production facilities.*** Social advertising requires data collected from users on an inherently social application. A user's search history, for example, will not provide enough data to create highly targeted advertising features, such as Facebook's Lookalike Audiences. Likewise, passive advertising, such as banner ads, or even general magazine or publication ads, provides little granular data that can then be used to further refine the targeting of advertising.

433. Providers of social advertising require specialized means of production because they must rely on data harvested from engagement among networks of users to facilitate highly targeted advertising. Platforms capable of delivering social advertising must therefore provide functionality such as image and video sharing, messaging, matchmaking, content sharing, and other inherently social features in order to obtain the data needed to allow for granular user and user network targeting.

434. Because social advertising allows iterative refinement of target audiences, a provider of social advertising must employ machine-learning or artificial intelligence algorithms that are trained on data collected from users as they interact and engage with content and advertising. As Facebook's head of its Applied Machine Learning Group, Joaquin Quiñonero Candela, told *Wired* magazine (emphasis in original):

Facebook today cannot exist without AI. Every time you use Facebook or Instagram or Messenger, you may not realize it, but your experiences are being powered by AI.

(emphasis added).

435. Other forms of advertising generally do not require sophisticated machine learning or artificial intelligence. For years prior to the advent of modern machine learning techniques, search engines such as Yahoo and Google used far less sophisticated algorithms to match user searches with suggested websites and, in turn, advertisements. Traditional advertising, such as magazine or television ads, require no algorithms at all, let alone artificial intelligence.

1 436. ***Distinct customers.*** Social advertising customers are distinct from search advertisers and
2 passive display advertisers. Moreover, social advertising is generally more effective at targeted
3 advertising rather than reaching a massive number of people.

4 437. Customers advertising on search engines are generally seeking priority among the search
5 results returned given a particular keyword. Customers advertising on social media platforms are
6 searching for users that fit a particular, predefined profile or set of characteristics. Small businesses that
7 do not generally have the budget to bid on coveted search results are nonetheless able to bid on granularly
8 defined audiences on a social media platform like Facebook.

9 438. ***Distinct prices and sensitivity to price changes.*** Social advertising prices are distinct from
10 other forms of advertising. In search-based advertising, certain search keywords are bid up by many
11 advertisers seeking to have their ads displayed as part of search results. This means that prices in certain
12 categories, such as legal or home improvement, will be significantly higher on search-based platforms
13 than on social advertising platforms like Facebook. For example, legal ads are on average \$1.32 on a
14 cost-per-click basis on Facebook, whereas they are \$6.75 on a cost-per-click basis on the Google Ads
15 platform. Likewise, consumer services ads are on average \$3.08 on a cost-per-click basis on Facebook's
16 platform vs. \$6.40 on Google Ads.

17 439. Because bidding on Google Ads and other search-based advertising is zero sum, meaning
18 only a certain number of ads can be coupled with a particular set of search keywords, pricing is more
19 sensitive to changes in demand.

20 440. Social advertising, however, allows granular targeting, avoiding much of the zero-sum
21 nature of other forms of advertising bidding. Moreover, social advertisers like Facebook can tailor
22 audiences, reducing the likelihood that advertisers will have to compete for the same display opportunity
23 at any given point in time.

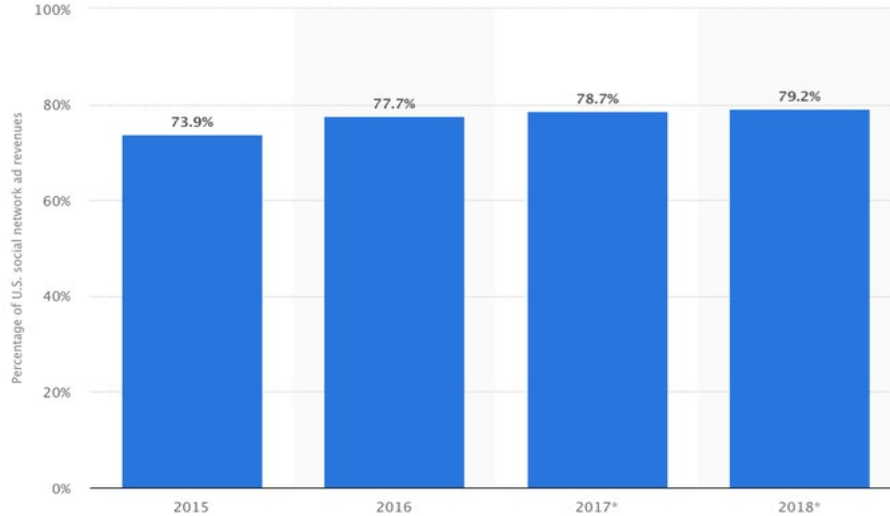
24 441. Other general forms of advertising such as television and print are even more zero-sum,
25 as there are limited time slots or available pages in a newspaper or magazine. Pricing is thus more
26 sensitive to demand in these forms of advertising.

1 442. Social advertising is thus entirely distinct. Because of the ability to target audiences to
2 advertising, pricing is proportional to the generality of the targeting, not simply to the general demand
3 for a limited search term, key word, or periodical placement.

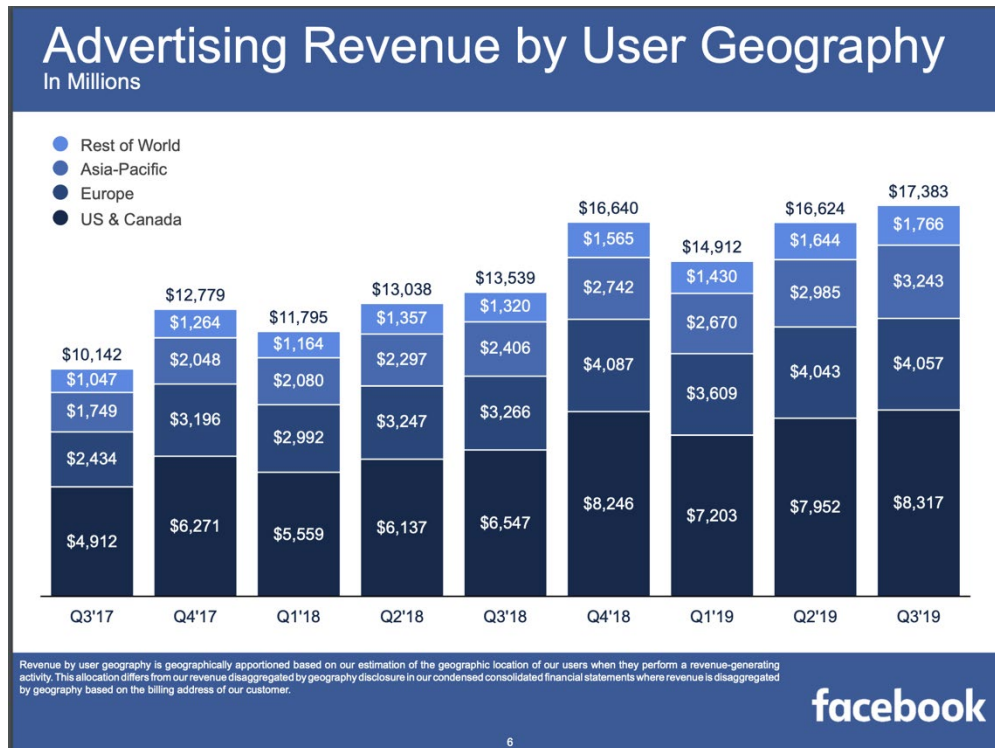
4 443. Moreover, Facebook has been able to consistently raise its prices in almost every year it
5 has sold advertising without facing price pressures from competitors. On a cost per mille (CPM)—or cost
6 per thousand advertising impressions—basis, Facebook’s advertising prices grew 90 percent year over
7 year according to a report at the end of 2019. In 2018, Vox reported that CPM prices on Facebook had
8 increased 122 percent year over year. In 2017, Facebook’s CPMs increased 171%. Facebook raised prices
9 in prior years as well.

10 444. ***Specialized vendors.*** The Social Advertising Market has its own distinct and specialized
11 vendors, namely advertising agencies such as Lyfe, Thrive, Volume Nine, Sociallyin, and Firebelly
12 Marketing, all of which boast a specialization in social media advertising and provide specialized social
13 media management products. There are many such specialty advertising agencies that specialize in
14 creating social media advertising campaigns. Moreover, specialized social media analytics vendors also
15 exist, such as Socialbakers, which provides aggregated analytics across social media platforms. There is
16 an entire ecosystem of vendors specializing in social advertising—an indicator that the Social Advertising
17 Market is its own distinct submarket of online advertising, requiring its own unique tools and expertise.

445. Facebook's revenue share of the Social Advertising Market is approximately 80%. Its share has been above 70% since 2015. It remains above that threshold to this day.



446. Facebook's advertising revenue has steadily grown both in the United States and globally. Facebook reported advertising revenues totaling \$17.383 billion as of Q3 2019. Approximately \$8.3 billion of that advertising revenue came from the United States.



1 447. From 2014 to 2016, Facebook's advertising revenues grew from \$2.9 billion to \$6.436
2 billion. During that period, and even before then, Facebook was one of the few social networks that
3 significantly monetized its network by selling advertising. Other competitors did not come close, and
4 Facebook established unrivaled dominance in the Social Advertising Market and maintains that
5 dominance to this day.

6 448. Twitter, one of Facebook's only competitors to sell significant social advertising during
7 the same period Facebook generated revenue in the Social Advertising Market, has never exceeded \$800
8 million in advertising revenues. Revenues in Q1 2012 were approximately \$45 million, growing to \$432
9 million in Q4 2014, and standing at \$702 million as of Q3 2019.

10 449. LinkedIn, another competitor that sells social advertising, generated roughly \$2 billion in
11 overall annual revenue by the end of 2018, with some portion of that coming from advertising.

12 450. Considering the revenue generated by LinkedIn and Twitter, Facebook's advertising
13 revenue accounts for approximately 86% of the total revenue share across the three largest firms
14 competing in the Social Advertising Market. Excluding the contributions from minor competitors that
15 monetize their social networks, the HHI of the Social Advertising Market is approximately 7,685, well
16 beyond what the DOJ considers a highly concentrated market.

17 **B. Barriers to Entry**

18 451. The Social Advertising Market is protected by the Data Targeting Barrier to Entry that
19 prevents Facebook's competitors from entering the market. Without a critical mass of social data and
20 machine-learning / AI technology, market participants in the Social Advertising Market cannot generate
21 revenue.

22 452. Moreover, without adequate social data and engagement with the social network, market
23 participants cannot display content to users that would provide enough value to generate engagement and
24 additional social data.

25 453. Likewise, without a critical mass of social data, advertising targeting will not be possible
26 or will be substantially diminished in effectiveness, thus reducing revenues in the advertising sales in the
27 Social Advertising Market.

1 454. A firm's market power in this market therefore depends on obtaining a critical mass of
2 social data and the technology to mine it. Because of network effects, users will not use a social network
3 that lacks enough social data to provide targeted content or to provide valuable connections to other users.
4 However, once a certain amount of social data is obtained by a market participant, a feedback loop may
5 form as a result of network effects, further increasing the amount of social data generated by the social
6 network.

7 455. A new entrant must therefore expend significant amounts of investments in capital,
8 technology and labor to create a network large enough to create the network effects necessary to compete
9 with dominant firms in the market.

10 456. Because of the large amount of capital and social data required to successfully enter the
11 Social Advertising Market, the DTBE effectively excludes entry by a new competitor, even a well-funded
12 one. Indeed, the DTBE prevented Google from successfully entering the market for social data and the
13 Social Advertising Market with its Google+ social networking product.

14 457. Although Google+ had successfully replicated Facebook's core functionality and even
15 added additional functionality to its software, its entry failed because it lacked the critical mass of social
16 data that is required to reverse the network effects protecting Facebook. Without that critical mass, users
17 will not incur the costs of switching from Facebook's social network to a new entrant's social network.
18 That is, a new entrant will not be able to provide a valuable network of engaged users upon entry to justify
19 a Facebook user to change social networks.

20 458. That is precisely what happened to Google. Although it had a massive user base, it lacked
21 engagement, which meant it did not provide a sufficient amount of social data that could be used to target
22 content and advertising to users. This, in turn, reduced the value of the entrant social network and
23 accordingly the attraction of switching from Facebook's social network to Google's.

24 459. The DTBE continues to reinforce Facebook's dominant position. In fact, by excluding
25 rivals and potentially competing social networks through the anticompetitive scheme described in this
26 Complaint, Facebook strengthened the DTBE, providing it a larger share of social data and a stronger
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monetization channel through social advertising. The additional amount of social data increases the value of its network, and the revenue from social advertising increases the cost of entry for a new rival.

460. Other barriers to entry in the Social Advertising Market include, but are not limited to, the high cost of development, data management, talent acquisition and retention, server infrastructure, development infrastructure, software technology, software libraries, and a brand and marketing presence sufficient enough to attract an engaged user base.

C. Relevant Geographic Market

461. The relevant geographic market is the United States Social Advertising Market.

462. For the social data that fuels a social advertising product, social data must be compatible with the customers purchasing that data. Thus, social data about a foreign market may be of little use for a U.S.-based advertiser. The data may be collected in a different language, may involve interests more pertinent to a particular geographic region (*e.g.*, American Football vs. Rugby), and may contain a demographic of users that share a common culture or merely a close proximity.

463. The same is true for the Social Advertising Market. An advertiser seeking to sell products designed for consumption in the United States may not have any use for a platform's advertising targeting capabilities outside of the United States. In the U.S., Facebook enjoys a higher market share of the Social Advertising Market than it does worldwide (which is already very high, as described in subsection VI.A). In short, Facebook enjoys an even more dominant share of the U.S. Social Advertising Market than it does globally.

464. In the U.S., Facebook's market share of the social data generated by users is even greater than its global market share. Services such as WeChat are geared towards Asian markets, particularly China, and do not generally compete in the U.S. market with Facebook's Messenger, Instagram, and core social networking product. Thus, Facebook's U.S.-based market share is even higher than its global market share referenced above in VI.A, which is already a dominant share of the Social Advertising Market.

X. HARM TO COMPETITION AND ANTITRUST INJURY

465. Facebook's anticompetitive scheme had the purpose and effect of monopolizing the Social Advertising Market in the United States. Facebook's conduct allowed it to maintain the monopoly and market power it had obtained by 2010 in the Social Advertising Market, and/or Facebook intended and attempted to acquire such a monopoly through its anticompetitive scheme.

466. Specifically, Facebook engaged in a series of acts in furtherance of its scheme, including, but not limited to: (a) the removal of important and necessary APIs from its Facebook Platform for the intended purpose of destroying competition in the Social Advertising Market; (b) the targeting of competitors for coercive Whitelist and Data Sharing Agreements on pain of denial of access to Facebook's Platform and APIs; (c) the use of secret surveillance software to identify and destroy potential competitive threats; (d) the acquisition of rivals with the purpose and effect of strengthening the DTBE and increasing Facebook's market share and market power in the Social Advertising Market; (f) misleading developers about the stability of Facebook's Platform to induce them to become dependent on Facebook's social data; and (g) entering into an anticompetitive agreement with Google to bolster and reinforce its dominant position in the Social Advertising Market.

467. Facebook engaged in this conduct while possessing, and/or acting intentionally to obtain, market power in the Social Advertising Market. Facebook enhanced and/or maintained its market power and monopoly through this scheme and then used it to exclude rivals and potential entrants from the Social Advertising Market (both directly and indirectly, by controlling supply and output of social data, a critical input for social advertising).

468. Facebook's anticompetitive scheme also reduced consumer choice by stifling innovation among nascent and established competitors that relied on Facebook's Platform for their products and business and by entering into agreements that strengthened the DTBE.

469. In the alternative, Facebook's scheme had the purpose and effect of achieving a dangerous probability of a monopoly in the United States Social Advertising Market.

470. Facebook's decision to remove the Friends and News Feed APIs excluded horizontal and/or direct competitors and rivals from the social data needed to fuel social advertising. Once a potential

1 threat to Facebook or Facebook's DTBE is eliminated, that entity cannot (a) monetize social data by
2 selling advertising; (b) accumulate social data sufficient to create a competing platform; and/or (c) even
3 purchase social data from Facebook at full price.

4 471. The above decision allowed Facebook to monopolize and/or maintain a monopoly in the
5 Social Advertising Market. Facebook's scheme allowed it to force chosen Platform developers to buy
6 large amounts of advertising on its struggling mobile platform, NEKO, in exchange for continued access
7 to some or all Core APIs. At the same time, Facebook's demand for these developers' social data in
8 exchange for continued access—including from competing social networks such as Pinterest and
9 Foursquare—ensured that no rival social advertising platform could emerge, as Facebook would have a
10 superset of its competitors' users' data. By gaining control over its competitors' social data—a critical
11 resource for social advertising—Facebook was able to dominate the Social Advertising Market, gaining
12 a monopoly share and sufficient market power to consistently and dramatically raise prices year after
13 year.

14 472. Facebook sacrificed short-term profits in the Social Advertising Market for the sole
15 purpose of executing its scheme and excluding competition. It made no rational business sense for
16 Facebook to exclude from its Platform the very entities that, if successful, would likely be the most ardent
17 consumers of Facebook's monetized social data and social advertising. Yet this is exactly what Facebook
18 did by leveraging its Platform in a manner that excluded nearly all Platform developers. As Facebook's
19 own executives and managers admitted in internal communications, Facebook did this strictly for
20 competitive dominance. Put simply, Facebook put the prospect of long-term dominance ahead of short-
21 term profit.

22 473. Facebook knew that once its competitors were foreclosed from the Social Advertising
23 Market by its anticompetitive scheme, Facebook would be free to charge monopoly prices for social data
24 and social advertising without facing any competitive price or quality pressure. In fact, Facebook has
25 reduced the value it provides to users through privacy and feature innovation throughout and after it
26 executed its anticompetitive scheme without sacrificing any significant marginal demand—a clear sign
27 of its market power in the Social Advertising Market. Likewise, Facebook has increased the price of its
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1 targeted advertising throughout the period of its anticompetitive scheme and to the present, also a sign of
2 its market power in Social Advertising Market.

3 474. Facebook's Whitelist and Data Sharing agreements ensured that Facebook would control
4 competitive threats to its platform and extract their most valuable asset—their social data. Facebook, by
5 requiring Whitelist and Data Sharing agreements by competitors, ensured that these competitors, some
6 of which were competing social networks, could not become alternative platforms for developers. That
7 meant that when Facebook excluded other developers from the market, they were completely foreclosed
8 and would have no reasonable alternative.

9 475. After excluding applications that competed with it from obtaining social data or from the
10 Social Advertising Market, Facebook was left with competition from entirely independent apps, which
11 did not rely on Facebook's social data, APIs, or advertising. Rather than compete on the merits with these
12 competitors, Facebook secretly spied on users using the Onavo data and the Onavo assets that it acquired,
13 identifying potentially competitive threats and then acquiring the companies that built those threatening
14 products, often at economically irrational prices.

15 476. Facebook used the Onavo data and Onavo-based spyware it owned or had in its possession
16 to track Instagram use. When Instagram's engagement and user reach indicated that it was a potential
17 competitive threat to Facebook, Facebook acquired Instagram and operated it alongside its products, and
18 presently seeks to complete integration of the product with Facebook's other major properties.

19 477. Likewise, Facebook secretly tracked mobile users' use of WhatsApp, and when Facebook
20 determined that WhatsApp threatened to become a platform entirely independent of Facebook's network
21 and social data, it purchased WhatsApp—at an economically irrational price of thousands of times the
22 company's revenue.

23 478. By acquiring potential threats independent of its platform, particularly WhatsApp and
24 Instagram, Facebook ensured that such companies could not be (a) alternative platforms upon which
25 developers excluded by Facebook's API removal could build their apps; (b) alternative sources of social
26 data that could be monetized through Social Advertising; or (c) alternative social networks that would
27 attract users, developers, and advertisers, thereby weakening the DTBE protecting Facebook's business.
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1 479. Facebook’s past integration of these acquired assets and its continuing effort to integrate
2 these acquired assets has continuing anticompetitive effects, and threatens to increase and/or maintain
3 Facebook’s dominance in the Social Advertising Market.

4 480. Facebook also used Onavo and the Onavo assets to maintain a real-time view of users’
5 mobile application use and mobile traffic. Facebook used that real-time information to monitor, punish,
6 or acquire any competitive threats. Indeed, Facebook used Onavo surveillance data to target threats for
7 denial of access to crucial APIs; for Whitelist and Data Sharing Agreements; or for targeted removal from
8 the market through acquisition.

9 481. The net effect of Facebook’s scheme was to, *inter alia*, strengthen and maintain the DTBE,
10 protect its monopoly in the Social Advertising Market, prevent market entry by a potential rival, and
11 reduce consumer choice.

12 482. Facebook’s scheme also ensured that there would be no competition by a rival social
13 advertising platform on non-price bases, such as, for example, increased privacy, more features, higher
14 quality features, new features, more valuable social connections, reduced advertising to users, or new use
15 cases. The scheme also foreclosed new or alternate business models by competitors or potential
16 competitors, including the business model Facebook itself forwent and sacrificed for anticompetitive
17 purposes—charging developers and competitors for API / Platform access or advertising.

18 483. Facebook’s anticompetitive scheme has also allowed it to raise prices for social
19 advertising during and after the execution of the scheme. Facebook continues to be one of the only sources
20 for targeted social advertising in the United States and in most of the world. As evidence of its market
21 power in the Social Advertising Market, Facebook has raised prices without sacrificing any demand.

22 484. Facebook’s requirement that developers purchase advertising as a condition of
23 maintaining access to Platform features artificially created demand for Facebook’s advertising products,
24 particularly its mobile advertising product. This had the purpose and effect of directly inflating
25 advertising prices.

26 485. Facebook’s anticompetitive agreement with Google allowed Facebook to track Facebook,
27 Instagram, and WhatsApp users outside of those applications and gave Facebook priority when
28

1 advertising to them. As a result of that agreement, Facebook did not meaningfully compete with Google
 2 in programmatic and display-based advertising product markets and sub-markets, and Google did not
 3 leverage its ability to identify and target Facebook users, which would diminish Facebook's dominance
 4 over targeted advertising to those users while on Facebook's social network. Because Google bolstered
 5 and reinforced Facebook's dominant position and market power in the Social Advertising Market,
 6 Facebook was able to maintain and raise prices with little or no competitive check.

7 486. Facebook's anticompetitive scheme excludes developers and would-be competitors from
 8 the Social Advertising Market; commandeers and restricts output of social data, a critical resource for
 9 social advertising; prevents rivals from entering or preempting the Social Advertising Market; and
 10 strengthens the DTBE protecting Facebook's business. All of this has resulted in sustained and increasing
 11 supracompetitive prices for Facebook advertisements. Each of the Plaintiffs (and the persons, entities,
 12 and companies in the proposed Classes) bought Facebook advertisements at supracompetitive prices
 13 inflated by Facebook's anticompetitive scheme.

14 487. Plaintiffs therefore were, and are, harmed in their business and property: they were
 15 overcharged for advertising as a result of unlawful, anticompetitive conduct by Facebook.

16 **CONCEALMENT AND TOLLING**

17 488. Until no earlier than November 6, 2019, Plaintiffs did not know, and could not reasonably
 18 have known, the truth about Facebook's anticompetitive conduct, including its purpose and intent to
 19 engage in anticompetitive conduct and the resulting price inflation, as alleged in this Complaint.

20 489. As set forth below, Facebook, its executives, officers, and senior employees affirmatively
 21 acted to prevent the disclosure of the truth, including through (a) enforcing a strict code of silence within
 22 the organization, (b) preventing disclosure to developers and the public during and after the scheme, (c)
 23 continuing to evangelize the Core APIs knowing that they were slated for removal for competitive
 24 reasons, (d) misleading developers and the public about the reasons for the removal through pretextual
 25 explanations, including by falsely stating that the APIs were being removed to provide users more control
 26 over their data or out of concern for user privacy, and (e) misleading regulators and the public about
 27 acquisitions, including of WhatsApp and Instagram. This conduct individually and taken together
 28

ensured that the levee would not break and that developers and advertisers would not pursue claims for fraud or anticompetitive conduct.

490. In fact, the levee did not break for years. It was not until internal documents came to light revealing the true, non-pretextual reasons for Facebook’s anticompetitive conduct, including the purported removal of the APIs as well as the lack of legitimate technical or business purpose for the purported removal; the anticompetitive effect and existence of the whitelisting agreements made in exchange for advertising purchases or user data; the capture, clone, or kill strategy implemented by Facebook; and the anticompetitive effects of its acquisitions of WhatsApp and Instagram, including the intended use of these assets, which was hidden from regulators and the public to obtain regulatory approval.

A. Facebook Made False Statements About the Availability of the API Functionality and Omitted from Those Statements that Facebook Had Internally Decided to Remove the APIs

491. During the period from September 2011 through April 2014, Facebook repeatedly told developers and the public that the functionality of the Core APIs as well as other functionality removed in April 2015 was available to them to be used as part of their applications. These false statements, omissions, and half-truths created a duty to speak fully and truthfully. As explained below, Facebook never did so—not even after it removed the Core APIs from its Platform.

492. During training sessions, hackathons, meetups, and conferences, many of which were posted on Facebook’s public YouTube channel, Facebook’s employees and executives evangelized the Core APIs to developers and other viewers. Facebook did so to ensure that developers and the public would not learn of the truth—that Facebook had internally begun the process of auditing apps to be slated for destruction. If the truth were known, developers would have fled the platform, destroying Facebook’s ability to anoint winners in various app categories and to destroy their actual and potential competitors by exploiting their reliance on the platform. For example:

- (a) On June 20, 2012, Cox presented the Ticketmaster app as a case study for what developers could do on Facebook’s platform. Specifically, Cox noted that the Ticketmaster app would allow users to see “which night your friends were going to the concert,” but the very API this

1 app would have relied on was slated for deprecation with respect to any developer that would
2 not ultimately enter into an agreement with Facebook for data or advertising.

3 (b) On October 20, 2013, Zuckerberg gave a speech that touted photo sharing by developer apps
4 and stated that it was an opportunity for developers to monetize their apps. The APIs that were
5 required for such an app, however, had already been restricted as of the date of his statements.
6 During the same speech, Zuckerberg claimed that developers would have access to user photos
7 for their own apps, but at the time he made the statement, Facebook had already planned to
8 remove that functionality from its platform.

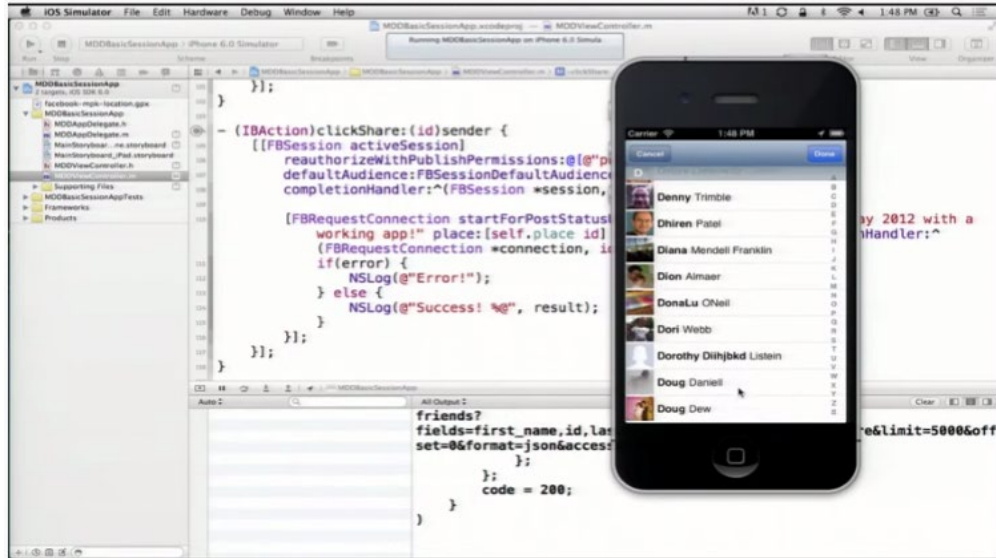
9 (c) On February 28, 2013, in a developer video published on Facebook's public YouTube
10 channel, entitled "Getting started with Facebook SDK for iOS," Facebook's Product Manager
11 of the Mobile Platform, Eddie O'Neil, taught developers how to build applications that access
12 a user's friends' data by building one with the developers in the audience. He showed how to
13 make a request to "get back photo albums from five friends" and then towards the end shows
14 the finished application stated: "Here are all my friends . . . As I scroll here, you see that we
15 haven't brought all the friend pictures in yet, but as we bring them in we'll stick them in that
16 cache and hold on to them . . . when we come back to display this it's instantaneous," meaning
17 that the app can show all the friends' photos in as single request to make it very easy for
18 developers to use this data in their applications. The presentation, including statements about
19 the demonstrated functionality, was false and misleading, as Facebook had internally already
20 begun the process of removing the very functionality that was being evangelized.

21 (d) At a developer conference in Moscow, which was posted on Facebook's developer YouTube
22 page on February 28, 2013, and entitled "Introduction to the Facebook Platform," Simon
23 Cross of Facebook demonstrated the use of several of the APIs, including the Friends and
24 News Feed APIs that were slated for removal by Facebook at the time of the demonstration
25 and while the presentation remained on the YouTube developer page. Cross never mentioned
26 Facebook's internal plans to remove the very functionality he advertised to developers. If he
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1 had told the truth, developers would have fled the platform and Facebook's anticompetitive
2 scheme would have unraveled.

3 (e) At the same February 28, 2013 conference, another Facebook employee, Tom Elliot, demoed
4 the publishing of information from a mobile app to a user's timeline as well as to the timeline
5 of a user's friends, noting that Facebook's Graph API allowed posts from a mobile app "on
6 the timeline of the user and the news feed of the friend of the user—these are people who have
7 never used your app before." This is precisely the functionality that would require the Friends
8 and News Feed APIs, yet Facebook and its employees never once mentioned that they were
9 internally planning to remove that functionality with respect to certain apps that either (i) did
10 not provide advertising or data to Facebook in exchange for continued use or (ii) were slated
11 for destruction after Facebook's audit of apps on its Platform.

12 (f) At Facebook's Mobile Developer Day in November 2012, Facebook again evangelized the
13 ability to use the Friends and News Feed APIs as part of mobile applications. Indeed, the
14 presentation displayed the ability to traverse a user's friends as part of the test app and to post
15 to a defined audience of friends, as well as to the news feed. The presentation was false and
16 misleading because the functionality being demonstrated was slated for removal with respect
17 to most of the apps on Facebook's Platform. Developers who viewed presentations like the
18 one at the Developer Day conference would be allowed to build their entire business on
19 functionality that Facebook knew it planned to remove.



- (g) In a June 26, 2013 video posted on Facebook’s public YouTube page for developers, Facebook touted the work done by one of its partners, Fab.com, which again demonstrated Friends and News Feed API functionality that was slated for removal. The video features a Fab.com employee stating that using the Graph API, they were able to “take everything they have in the catalog and narrowly target to a customer” to “see a product on Facebook and then share with their friends.” Again, Facebook omitted that it was planning to remove the very APIs that made the featured functionality possible and did so because revelation of the truth would have prematurely ended its anticompetitive scheme before it could be completed.
- (h) Facebook was consistently misleading about the functionality available to developers through the News Feed and Friends APIs. On June 20, 2013, Simon Cross, in a training video published on Facebook’s YouTube Channel, entitled “Getting Started with Graph API,” presented “[a]n introduction to Facebook’s Graph API which is the primary way to programmatically integrate with Facebook—publishing Open Graph stories, reading data about the current user—their details, their likes and interests and friends.” The video referenced Facebook’s posted developer documentation, and notably featured the following false and misleading statements about the functionality provided by the Graph APIs, including the Friends and News Feed APIs:

1 Graph API Explorer make it really easy to get started . . . Placed, Pages,
2 Photos, Events and News Feed stories as well as Users are all considered
3 objects in the graph . . . We can go deeper and deeper into the graph. We
4 can also request the picture connection on each returned User object. This
would allow me to show the profile picture of each of my friends and to
get all of this data in a single request.

5 493. These statements identified above were false and misleading not only because they were
6 designed to induce developers to build for functionality that was slated for selective removal, but because
7 the statements maintained the secrecy needed for the anticompetitive scheme's success. Facebook knew
8 that if developers found out the truth, they would flee the Platform and cease making apps that increased
9 the value of Facebook. Without the proliferation of apps on its Platform, Facebook could not choose the
10 "winners" among them for continued access while eliminating any actual or potential competitors when
it eventually removed the APIs.

11 494. These false statements from the end of 2011 through the removal of the APIs in April
12 2015 created a clear duty to speak fully and truthfully. When Facebook finally announced and purported
13 to remove the APIs, it breached that duty, preventing developers and the public from learning the true
14 reasons for the purported removal of the APIs.

15 **B. Facebook and Its Employees Maintained a Code of Silence about the Scheme in the**
16 **Face of a Duty to Speak**

17 495. Facebook senior executives, including Mark Zuckerberg, acted internally to ensure that
18 the purported removal of the APIs, the reasons for the purported removal, and the overall anticompetitive
19 scheme was kept a secret.

20 496. For example, when Facebook senior executives began plans to announce Zuckerberg's
21 decision to remove the APIs and to enforce reciprocity, Zuckerberg vetoed the decision in December
22 2012.

23 497. When Sukhar raised the need to inform developers of Facebook's internal plans for the
24 APIs—namely, their removal for competitive reasons—Vernal told him that any mention of the
25 competitive reasons for the purported removal would mean a "high likelihood of breaking into jail."
26 Sukhar did not at any point reveal the truth to developers or the public, even though he internally observed
27 that he had been speaking to dozens of developers "who will get totally fucked by this and it won't even
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1 be for the right reason.” In fact, he acquiesced to the scheme, referring to it as the “switcharoo plan” when
 2 speaking to other Facebook engineers.

3 498. Facebook’s George Lee raised the fact that Facebook was continuing to mislead
 4 developers about the APIs, even on the eve of the announcement of their purported removal, stating to
 5 Purdy and Vernal that “partner managers are still selling products that we ask them to sell, so when it
 6 comes to feed integration, we’re still telling people to use [Open Graph].” He noted that Facebook had
 7 “decided amongst ourselves that this is no longer the future” but that developers were being told
 8 something different. Vernal, Purdy, and Lee all knew that Facebook was going to purport to remove the
 9 Friends and News Feed APIs, but none of them stopped Facebook from telling developers or the public
 10 otherwise. These systematic and knowingly false statements to developers and the public created a duty
 11 to speak fully and truthfully, but Facebook never did so.

12 499. All of this conduct instilled in Facebook’s employees a need for secrecy. Even when they
 13 raised issues with their superiors, none of them would correct the systematic false statements Facebook
 14 was making to developers and the public contemporaneously with their internal execution of the scheme
 15 to remove the APIs for competitive reasons, including the internal audit of apps. They failed to correct
 16 those statements notwithstanding that their false statements about the Platform and its available
 17 functionality created a duty to speak fully and truthfully. For example, as described fully above, in internal
 18 e-mails to other Facebook executives and employees, Sukhar recounted conversations with developers
 19 during which he did not disclose the truth about the APIs.

20 **C. Facebook Lied to Developers and the Public About the Reasons for the Purported**
 21 **Removal, Offering False, Misleading, and Pretextual Reasons Instead of the Truth**

22 500. At the April 30, 2014 Facebook F8 developers conference, Facebook misleadingly
 23 downplayed the announcement of its purported removal of the APIs by folding it into its announcement
 24 of new Facebook authentication features, including changes to Facebook’s Login system. Zuckerberg
 25 never mentioned during his keynote or any time during the conference that the most central APIs on the
 26 Platform, the Friends and News Feed APIs, were purportedly being removed. Instead, the announcement
 27
 28

1 was buried at the bottom of a public FAQ released during the conference. The FAQ falsely stated that
2 “we are removing several rarely used API endpoints; visit our changelog for details.”

3 501. This public statement was false because Facebook had internally surveyed the apps relying
4 on the APIs and found that thousands of them relied on those APIs. They were not in any sense “rarely
5 used.” The false statement was made to avoid drawing attention to Facebook’s radical decision to
6 announce the purported removal of the Friends and News Feed APIs. By making a public false statement
7 about the reasons for the purported removal of the APIs, Facebook assumed a duty to speak fully and
8 truthfully on the subject. It did not do so.

9 502. Facebook’s public announcement of the purported removal of the Friends and News Feed
10 APIs was deliberately designed to mislead, as it was announced as part of a broader Facebook Login
11 announcement that was supposedly intended to increase user control over data. Indeed, in a public blog
12 post made on the day of the announcement, Facebook’s Jeffrey Spehar stated that the changes were made
13 because “people want more control over sharing their personal information” and because “[w]e’ve heard
14 from people that they’re often surprised when a friend shared their information with an app.”

15 503. Facebook never mentioned that it had internally audited apps to determine whether they
16 were competitive and that senior executives had internally stated that the decision was being driven by
17 competitive reasons, not legitimate business or technical reasons. Indeed, Facebook never mentioned that
18 its own engineers thought the removal of the Friends and News Feed API was beyond parody and
19 “insane.” The statements about user feedback as the reason for the decision were pretextual and
20 misleading.

21 504. Between the announcement and the removal of the APIs in April 2015, Facebook
22 continued to make false and misleading statements and omissions to developers and the public about the
23 purported removal of the APIs, including about the reasons for the purported removal.

24 505. For example, Facebook told developers and others who inquired that the APIs were “going
25 away.” Indeed, Konstantinos Papamiltiadis told developer Airbiquity on March 30, 2015, precisely this:
26 “there are certain things that are going away on 4.30 that we can’t provide extensions for,” naming the
27 Friends and News Feed APIs explicitly in an e-mail to Airbiquity’s product manager. At no time did
28

1 Papamiltiadis or anyone else at Facebook tell the full truth—that it was secretly making deals with
2 countless developers it had hand-selected for continued use in exchange for their social data and other
3 compensation.

4 506. On March 30, 2015, Papamiltiadis also told Microsoft the same thing: that the APIs were
5 going away after April 30, 2015. Again, he never mentioned that in fact Facebook had made secret deals
6 with certain developers.

7 507. These statements indicate that Facebook’s statements were broad and systematic, designed
8 to mislead developers and the public into thinking that Facebook had evenhandedly applied its policy to
9 all developers alike. If the truth were known, developers (and other interested parties, including members
10 of the press) would have not only complained, but pursued the true reasons for Facebook’s purported
11 withdrawal, which is why Facebook was careful to make false statements to developers and other
12 interested parties whom Facebook had not selected for continued use.

13 508. Even in a blog post from April 30, 2015, the date the APIs were purportedly removed,
14 Facebook claimed that “Facebook is migrating all apps to v2.0 of the Graph API with the goal of giving
15 people more control over the information they share with apps.” That was not, however, the goal of the
16 purported API withdrawal. Facebook had internally made the decision for competitive reasons and had
17 no legitimate technical or business justification for the decision. Indeed, documents during the several
18 years Facebook and its senior executives planned and executed the scheme reflect that the APIs were
19 being purportedly withdrawn for competitive reasons, not for increasing user control over shared
20 information.

21 509. Facebook continued to mislead developers and the public by offering pretextual reasons
22 for the purported withdrawal of the APIs. Simon Cross frequented developer message boards, including
23 the widely read public message board Stack Overflow, and referred developers and others asking
24 questions about the APIs to Facebook’s public documentation and FAQ. The FAQ stated:

25 Why are you deprecating the permissions to get information about people’s
26 friends?
27
28

1 To put people first. This update was in response to feedback from people
2 who were uncomfortable knowing that a friend could share their
3 information with an app. With Graph API v.2.0, we wanted to make sure
4 the people had more control over their information.

5 510. The reasons offered by the public FAQ were false and misleading and omitted material
6 information. Namely, the FAQ's statement that the purported removal of the APIs was in response to
7 user feedback was false, and mere pretext designed to mislead developers and the public as to the real
8 reasons for the purported withdrawal of the APIs. In fact, Facebook had made the decision approximately
9 three years earlier, as part of Zuckerberg's mandate that a policy of reciprocity be enforced as to
10 developers and that competitive apps be prevented from using Facebook's APIs. Indeed, Facebook had
11 used information gleaned from spying on users to measure their engagement with apps, and had
12 performed an internal audit to determine which apps were competitive or potentially competitive with
13 Facebook so that they could be marked for destruction. Facebook's internal executives, including Sukhar,
14 lamented that the purported removal of the APIs was not based on any legitimate technical reason, and
15 Facebook's own engineers opposed the decision. None of these executives and employees
16 contemporaneously cited user feedback as even a purported reason for the removal of the APIs.

17 511. Moreover, by speaking partially, falsely, and misleadingly to the public about the reasons
18 for the purported API withdrawal, Facebook was under a duty to speak fully and truthfully on the subject.
19 It did not do so. Instead, it omitted (a) that the plan to purportedly deprecate the APIs had been made
20 years prior to the announcement by senior executives, (b) that the reasons for the purported removal were
21 competitive, not because of user feedback, and (c) that Facebook had hand selected certain apps for
22 continued use of the APIs. Indeed, Facebook not only omitted that it was broadly entering into extended
23 API agreements, it made false and misleading statements to the contrary in its public FAQ, including that
24 "[w]e've removed access to friends data in v.2.0" without any mention of the extended API agreements
25 it was entering with certain app developers.

26 512. The announcement, FAQ, documentation, and posts to developer message boards misled
27 developers and the public. They accepted the pretextual reasons for the purported API removal after
28 reading or otherwise consuming Facebook's communications (including documentation, message board

1 answers, and videos) posted after the announcement. If they had known the truth, they would have
2 inquired further into the real reasons for the withdrawal (and so would the press), but Facebook's false
3 statements successfully prevented any further inquiry.

4 513. Facebook was careful even when it referenced the purported April 2015 withdrawal of the
5 Friends and News Feed APIs to continue to offer a false, misleading, and pretextual rationale for the
6 decision. Indeed, when Facebook announced additional Platform changes on March 26, 2018, senior
7 executive Ime Archibong referenced the purported API withdrawal and an investigation into apps that
8 had access to a large amount of information before the purported withdrawal as part of a broader initiative
9 to prevent "misuse" of user data and to implement "additional measures to protect data" and give "people
10 more control of their information." That was not, however, the real reason for the purported withdrawal
11 of the APIs in April 2015, and Facebook again failed to mention the real reasons for doing so despite
12 undertaking a duty to speak fully and truthfully, including when it again spoke publicly on the subject in
13 March 2018.

14 514. Even after certain internal Facebook documents became public after the UK Parliament
15 used its legal powers to seize them on November 24, 2018, Facebook continued to make false and
16 misleading statements to conceal from developers, the public, and the press the real reasons for the
17 purported API withdrawal.

18 515. In a public blog post by the company posted on December 5, 2018, Facebook stated falsely
19 and misleadingly that extended API agreements to access the purportedly withdrawn APIs were granted
20 to developers in the "short term" and "only used to prevent people from losing access to specific functions
21 as developers updated their apps." The blog post also stated that the changes to the APIs were made to
22 prevent the improper access to user data that occurred as part of the Cambridge Analytica scandal. That
23 was not, however, the reason Facebook purported to remove the APIs. In fact, Facebook continued to
24 allow broad access to user data for hand-selected apps that entered into agreements with Facebook to
25 provide their social data back to Facebook or provide other compensation, such as large advertising
26 purchases.

516. On November 6, 2019, NBC News posted the full trove of documents seized by the UK Parliament on its website. For the first time, Facebook’s statements to developers and the public were revealed to have been false, misleading, or having omitted material information. This was the first time any developer or advertiser—or anyone in the public—could have learned the real reason for the purported withdrawal of the APIs: anticompetitive reasons. It was also the first time developers, advertisers, and the public could learn (1) that Facebook internally viewed the purported withdrawal as lacking any legitimate business or technical justification, and (2) that the scheme had broad impact on competition.

D. Facebook Misled Regulators and the Public About Its Integration of Instagram and WhatsApp with Its Facebook Product

517. At the beginning of 2020, Facebook scrambled to integrate the backends of its Facebook products with its acquired products, WhatsApp and Instagram. Until that integration, Facebook had largely maintained the separateness of the products, but in response to threats of divestiture from antitrust regulators, Facebook began an aggressive effort to integrate the backends—the brains of each product—reneging on promises to regulators to keep the products separate and to frustrate any divestiture ordered.

* * *

518. When it acquired WhatsApp, Facebook publicly stated that it would operate WhatsApp independently from its other Facebook properties, but that turned out not to be the case. Indeed, the European Union found Facebook lied to regulators about its integration plans for WhatsApp and fined Facebook € 110 million. The EC regulator explained the reasons for its fine in a press release, dated May 17, 2017:

The European Commission has fined Facebook €110 million for providing incorrect or misleading information during the Commission’s 2014 investigation under the EU Merger Regulation of Facebook’s acquisition of WhatsApp . . .

When Facebook notified the acquisition of WhatsApp in 2014, it informed the Commission that it would be unable to establish reliable automated matching between Facebook’s users’ accounts and WhatsApp users’ accounts. It stated this both in the notification form and in a reply to a request for information from the Commission. However, in August 2016,

WhatsApp announced updates to its terms of service and privacy policy, including the possibility of linking WhatsApp users' phone numbers with Facebook users' identities.

On 20 December 2016, the Commission addressed a Statement of Objections to Facebook detailing its concerns.

The commission has found that, contrary to Facebook's statements in the 2014 merger review process, the technical possibility of automatically matching Facebook and WhatsApp users' identities already existed in 2014, and that Facebook staff were aware of such a possibility.

519. Facebook had lied to regulators. It was always capable of integrating its advertising targeting systems and in fact had done so. After the acquisition, WhatsApp's founder Brian Acton quit in protest in March 2018, stating on Twitter: "it is time. #deletefacebook."



520. Consistent with the EC's finding, Acton believed Facebook misled European Union regulators about its plans to comingle WhatsApp and Facebook data for use in its ad targeting system. And, despite Zuckerberg's promise that he would not try to monetize WhatsApp for five years, Facebook almost immediately began exploring the monetization of WhatsApp without its founders' consent. Acton left behind \$850 million in stock when he quit in protest.

521. WhatsApp's other co-founder, Jan Koum, left in April of 2018. Instagram's founders Kevin Systrom and Mike Krieger followed suit shortly after, resigning from Facebook in the Fall of 2018.

522. With the founders of its two acquired competitors—Instagram and WhatsApp—gone, by late 2018 Facebook had unfettered internal license to integrate two of the most powerful rival social networks with Facebook's core business.

523. Facebook, however, knew it was vulnerable to divestiture of the acquired assets if it continued to operate them independently, and the integration of its assets would give it unprecedented control over user social data globally.

524. Zuckerberg and Facebook immediately devised a plan to integrate backends of the WhatsApp, Instagram and Facebook products. On March 6, 2019, Zuckerberg announced a plan to integrate the apps on his blog, pretextually cloaking the maneuver as a privacy-related decision to frustrate regulators and hide the anticompetitive effects of his integration of the acquired products. Facebook's announced plan would implement a unitary form of end-to-end encryption across its messaging and photo sharing apps, and would integrate the acquired assets (WhatsApp, Instagram, and their respective social data) to make them interoperable with—and inextricable from—Facebook's core product.

525. Although Facebook had prior to the backend integration created interoperability across its applications of its tracking and surveillance infrastructure, the full integration of the so-called backend provides Facebook with surveillance, advertising targeting, and market power incomparable from any other social network (and likely any other private entity) on earth. The integration would ensure that Instagram and WhatsApp networks can also never become viable platform alternatives to Facebook's Platform. Indeed, once integrated, Instagram and WhatsApp would not be alternatives but part and parcel of the very Facebook Graph API and Platform the company has anticompetitively leveraged dominance in the Social Advertising Market to the detriment of thousands of advertisers, including Plaintiffs and Class Members herein.

526. The back-end integration is a game changer—and directly reneges on Facebook's statements to regulators about its ability to merge the apps together and to consolidate market power. The integration means that 2.6 billion users across Facebook, WhatsApp and Instagram would be interoperably reachable across platforms for the first time, creating a massive and unprecedented concentration of market power in the Social Advertising Market.

CLASS ACTION ALLEGATIONS

527. The Classes' claims all derive directly from a course of conduct by Facebook. Facebook has engaged in uniform and standardized conduct toward the class. Facebook did not materially differentiate in its actions or inactions toward members of the class. The objective facts on these subjects are the same for all class members. Within each Claim for Relief asserted by the class, the same legal

standards govern. Accordingly, Plaintiffs bring this lawsuit as a class action on their own behalf and on behalf of all other persons similarly situated as members of the proposed class pursuant to Federal Rules of Civil Procedure 23(a) and (b)(3) and/or (b)(2) and/or (c)(4). This action satisfies the numerosity, commonality, typicality, adequacy, predominance, and superiority requirements of those provisions.

The Pre-2018 Nationwide Advertiser Class

528. Between October 1, 2012, and April 3, 2018, Facebook advertisers, including Plaintiffs Affilious, Jessyca Frederick, Joshua Jeon, and 406 Property Services were governed by materially common terms of service, which applied generally to both commercial and non-commercial Facebook accounts during this period.

529. Plaintiffs Affilious, Jessyca Frederick, Joshua Jeon, and 406 Property Services bring this action and seek to certify and maintain it as a class action under Rules 23(a); (b)(2); and/or (b)(3); and/or (c)(4) of the Federal Rules of Civil Procedure on behalf of themselves and a Pre-2018 Nationwide Advertiser Class defined as follows:

All persons, entities, and/or corporations in the United States who purchased advertising from Facebook between October 1, 2012, and April 3, 2018, but not after April 3, 2018, and were thereby injured by anticompetitive price inflation in the Social Advertising Market (the “Pre-2018 Class Period”).

530. Excluded from the Pre-2018 Nationwide Advertiser Class is the Post-2018 Nationwide Advertiser Class, Facebook, its employees, officers, directors, legal representatives, heirs, successors, and wholly or partly owned subsidiaries or affiliates; and the judicial officers and their immediate family members and associated court staff assigned to this case.

The Post-2018 Nationwide Advertiser Class

531. Between April 4, 2018, and the present, Facebook advertisers, including Plaintiffs Mark Berney, Mark Young, Jessica Layser, Katherine Looper, and Zahara Mossman, have been governed by materially common terms of service, which applied specifically to “commercial” Facebook accounts during this period.

532. Plaintiffs Mark Berney, Mark Young, Jessica Layser, Katherine Looper, and Zahara Mossman, bring this action and seek to certify and maintain it as a class action under Rules 23(a); (b)(2); and/or (b)(3); and/or (c)(4) of the Federal Rules of Civil Procedure on behalf of themselves and a Post-2018 Nationwide Advertiser Class defined as follows:

All persons, entities, and/or corporations in the United States who purchased advertising from Facebook between April 4, 2018, and the present, and were thereby injured by anticompetitive price inflation in the Social Advertising Market (the “Post-2018 Class Period”).

533. Excluded from the Post-2018 Nationwide Advertiser Class is the Pre-2018 Nationwide Advertiser Class, Facebook, its employees, officers, directors, legal representatives, heirs, successors, and wholly or partly owned subsidiaries or affiliates; and the judicial officers and their immediate family members and associated court staff assigned to this case.

Numerosity and Ascertainability

534. Each class in this action satisfies the requirements of Fed. R. Civ. P. 23(a)(1). Thousands of persons, entities, and/or companies nationwide purchased advertising from Facebook in each of the Pre-2018 and Post-2018 Class Periods. Individual joinder of all Class members is impracticable.

535. The Classes are ascertainable because their members can be readily identified using Facebook accounts, Facebook Ads registrations, and other records and information kept by Facebook or third parties in the usual course of business and within their control. Plaintiffs anticipate providing appropriate notice to the certified Classes, in compliance with Fed. R. Civ. P. 23(c)(1)(2)(A) and/or (B), to be approved by the Court after class certification, or pursuant to court order under Fed. R. Civ. P. 23(d).

Predominance of Common Issues

536. This action satisfies the requirements of Fed. R. Civ. P. 23(a)(2) and 23(b)(3) because questions of law and fact that have common answers that are the same for each Class predominate over questions affecting only individual Class members.

537. Common issues include, without limitation, the following questions of law and fact for both the Pre-2018 and Post-2018 Nationwide Advertiser Classes:

- a. Whether Defendant monopolized the Social Advertising Market.
- b. Whether Defendant, its employees or affiliates, intended to monopolize the Social Advertising Market.
- c. Whether Defendant attempted to monopolize the Social Advertising Market.
- d. Whether Defendant possessed monopoly or market power in the Social Advertising Market.
- e. Whether user data and data obtained by third parties created a Data Targeting Barrier to Entry that protected Facebook's market position and/or monopoly, reduced competition or entry in the Social Advertising Market, and/or increased prices for products in that market, including, but not limited to, advertising sold to members of the proposed Classes.
- f. Whether Defendant's decision to withdraw the Friend and Feed Graph APIs lacked any justification and/or whether the procompetitive effects of the decision to do so, if any, was outweighed by the anticompetitive effects.
- g. Whether Defendant sacrificed short-term profits to monopolize, or attempt to monopolize, the Social Advertising Market.
- h. Whether the procompetitive effects of the decision to withdraw the Friend and Feed Graph APIs, if any at all existed, could have been accomplished by less restrictive means.
- i. Whether Defendant's agreements with whitelisted developers violated Section 2 of the Sherman Act, including whether the agreements restrained trade or strengthened the Data Targeting Barrier to Entry.
- j. Whether Defendant's purchase of WhatsApp violated Section 2 of the Sherman Act.
- k. Whether Defendant's agreement with Google to reinforce and bolster Facebook's dominance in the Social Advertising Market violated Sections 1 and 2 of the Sherman Act.
- l. Whether Defendant's conduct harmed competition in the Social Advertising Market.

m. Whether Defendant's conduct caused price increases or the reduction of consumer or developer choice in the Social Advertising Market.

n. Whether Defendant's unlawful conduct was a substantial contributing factor in the injury to members of the Classes.

Typicality

538. This action satisfies the requirements of Fed. R. Civ. P. 23(a)(3) because for each proposed Class, the identified Plaintiffs' claims are typical of the claims of other Class members and arise from the same course of conduct by Defendant. The relief that each Class's named Plaintiffs seek is typical of the relief sought for the absent Class members.

Adequate Representation

539. Plaintiffs will fairly and adequately represent and protect the interests of the Classes. Plaintiffs have retained counsel with substantial experience in prosecuting antitrust and consumer class actions.

540. Plaintiffs and their counsel are committed to vigorously prosecuting this action on behalf of the Classes and have the financial resources to do so. Neither Plaintiffs nor their counsel have interests adverse to those of the Classes.

Superiority

541. This action satisfies the requirements of Fed. R. Civ. P. 23(b)(2) because Defendant has acted and refused to act on grounds generally applicable to the Classes, thereby making appropriate final injunctive and/or corresponding declaratory relief with respect to the Classes as a whole.

542. This action satisfies the requirements of Fed. R. Civ. P. 23(b)(3) because a class action is superior to other available methods for the fair and efficient adjudication of this controversy. For each proposed Class, the common questions of law and fact regarding Defendant's conduct and responsibility predominate over any question affecting only individual Class members.

543. Because the damages suffered by each individual Class member may be relatively smaller than the costs of litigation, the expense and burden of individual litigation would make it very difficult or impossible for individual Class members to redress the wrongs done to each of them individually, such

1 that most or all Class members would have no rational economic interest in individually controlling the
2 prosecution of specific actions, and the burden imposed on the judicial system by individual litigation by
3 even a small fraction of the Class would be enormous, making class adjudication the superior alternative
4 under Fed. R. Civ. P. 23(b)(3)(A) for each of the proposed Classes.

5 544. For each of the proposed Classes, the conduct of this action as a class action presents far
6 fewer management difficulties, far better conserves judicial resources and the parties' resources, and far
7 more effectively protects the rights of each Class member than would piecemeal litigation. Compared to
8 the expense, burdens, inconsistencies, economic infeasibility, and inefficiencies of individualized
9 litigation, the challenges of managing this action as a class action are substantially outweighed by the
10 benefits to the legitimate interests of the parties, the court, and the public of class treatment in this Court,
11 making class adjudication superior to other alternatives, under Fed. R. Civ. P. 23(b)(3)(D).

12 545. Plaintiffs are not aware of any obstacles likely to be encountered in the management of
13 this action that would preclude its maintenance as a class action. Rule 23 provides the Court with authority
14 and flexibility to maximize the efficiencies and benefits of the class mechanism and reduce management
15 challenges. The Court may, on motion of Plaintiffs or on its own determination, certify nationwide,
16 statewide, and/or multistate classes for claims sharing common legal questions; utilize the provisions of
17 Rule 23(c)(4) to certify any particular claims, issues, or common questions of fact or law for class-wide
18 adjudication; certify and adjudicate bellwether class claims; and utilize Rule 23(c)(5) to divide any class
19 into subclasses.

20 **REALLEGATION AND INCORPORATION BY REFERENCE**

21 546. Plaintiffs reallege and incorporate by reference all the preceding paragraphs and
22 allegations of this Complaint, as though fully set forth in each of the following Claims for Relief asserted
23 on behalf of the Classes.

CLAIMS FOR RELIEF

COUNT I

**Section 2 Sherman Act:
Monopolization**

547. Defendant has willfully acquired and maintained monopoly power in the relevant market for Social Advertising.

548. Facebook possesses monopoly power in the relevant market for Social Advertising. Facebook has the power to control prices or exclude competition in the relevant market.

549. Facebook's revenue share of the Social Advertising Market is approximately 80%; its share has been above 70% since 2015.

550. Defendant has willfully acquired and maintained monopoly power for Facebook in the relevant market for Social Advertising. As alleged in this Complaint, Defendant has accomplished this by means of predatory, exclusionary, and anticompetitive conduct, including but not limited to: anticompetitively removing and/or reengineering Platform functionality; refusing to sell social data and/or advertising to competing applications developers; extracting social data from competitors through threats of blacklisting and/or through nonconsensual data scraping; targeting competitors for reciprocity or denial of API access; entering into whitelisting and data sharing agreements with competitors, including for large advertising purchases or the provision of user data; engaging in covert surveillance of competitors' users in order to detect and ultimately acquire competitive threats before they became too formidable; and agreeing with Google to reinforce and bolster its market power in the Social Advertising Market as well as the DTBE.

551. Defendant's conduct alleged here has had an anticompetitive effect in the relevant market for Social Advertising.

552. Defendant's conduct alleged here has no legitimate business purpose or procompetitive effect.

553. Defendant's conduct alleged here has had a substantial effect on interstate commerce.

554. Plaintiffs and the Classes have been and will be injured in their business or property as a result of Defendant's conduct alleged in this Complaint.

555. Plaintiffs and the Classes have suffered and will suffer injury of the type that the antitrust laws were intended to prevent by reason of Defendant's conduct. Plaintiffs and the Classes have been and will be injured by the harm to competition as a result of Defendant's conduct.

COUNT II
Section 2 Sherman Act:
Attempted Monopolization

556. As alleged in this Complaint, Defendant has engaged in predatory, exclusionary, and anticompetitive conduct, including but not limited to: anticompetitively removing and/or reengineering Platform functionality; refusing to sell social data and/or advertising to competing applications developers; extracting social data from competitors through threats of blacklisting and/or through nonconsensual data scraping; targeting competitors for reciprocity or denial of API access; entering into whitelisting and data sharing agreements with competitors, including for large advertising purchases or the provision of user data; engaging in covert surveillance of competitors' users in order to detect and ultimately acquire competitive threats before they became too formidable; and agreeing with Google to reinforce and bolster its market power in the Social Advertising Market as well as the DTBE.

557. Defendant's conduct alleged here has had an anticompetitive effect in the relevant market for Social Advertising.

558. Defendant's conduct alleged here has no legitimate business purpose or procompetitive effect.

559. Defendant has engaged in this conduct with the specific intent of monopolizing the relevant market for Social Advertising.

560. Defendant has engaged in this conduct with a dangerous probability of monopolizing the relevant market for Social Advertising.

561. Defendant's conduct alleged here has had a substantial effect on interstate commerce.

562. Plaintiffs and the Classes have been and will be injured in their business or property as a result of Defendant's conduct alleged in this Complaint.

563. Plaintiffs and the Classes have suffered and will suffer injury of the type that the antitrust laws were intended to prevent by reason of Defendant's conduct. Plaintiffs and the Classes have been and will be injured by the harm to competition as a result of Defendant's conduct.

COUNT III
Section 1 Sherman Act:
Restraint of Trade

564. As alleged in this Complaint, Facebook knowingly and intentionally entered into an agreement to restrict trade in order to preserve the DTBE and protect Facebook's control of social advertising. This agreement, by bolstering and reinforcing Facebook's market power and dominance in the Social Advertising Market, had the purpose and effect of maintaining market divisions and/or segmentation, allowing Facebook to continue charging a significant price premium for its targeted advertising sold in the Social Advertising Market. Because of this agreement, no fungible level of targeted advertising would emerge that could rival Facebook's ad products.

565. Defendant's conduct alleged above is a *per se* violation of Section 1 of the Sherman Act, 15 U.S.C. § 1. Plaintiffs therefore do not need to allege a relevant market. To the extent a market must be alleged, Facebook's restraint of trade has had an anticompetitive effect in the relevant market of Social Advertising in the United States.

566. Defendant's conduct alleged here has no legitimate business purpose or procompetitive effect.

567. Defendant's conduct has had a substantial effect on interstate commerce.

568. Plaintiffs and the Classes have been and will be injured in their business or property as a result of Defendant's conduct alleged here.

569. Plaintiffs and the Classes have suffered and will suffer injury of the type that the antitrust laws were intended to prevent by reason of Defendant's conduct. Plaintiffs and the Classes have been and will be injured by the harm to competition as a result of Defendant's conduct.

PRAYER FOR RELIEF

WHEREFORE, Plaintiffs request that judgment be entered against Defendant and that the Court grant the following:

- A. Determine that this action may be maintained as a class action pursuant to Rules 23(a), (b)(2), (b)(3) and/or (c)(4) of the Federal Rules of Civil Procedure, and direct that reasonable notice of this action, as provided by Rule 23(c)(2), be given to the Classes, and declare Plaintiffs as the representatives of the Classes;
- B. Enter a judgment against Defendant in favor of Plaintiffs and the Classes;
- C. Award the Classes damages (i.e., three times their damages) in amount to be determined at trial;
- D. Award actual, compensatory, statutory, and consequential damages;
- E. Award equitable monetary relief, including restitution and disgorgement of all ill-gotten gains, and the imposition of a constructive trust upon, or otherwise restricting the proceeds of Defendant's ill-gotten gains, to ensure an effective remedy;
- F. Grant permanent injunctive relief pursuant to Section 16 of the Clayton Act to remedy the ongoing anticompetitive effects of Defendant's unlawful conduct;
- G. Award pre-judgment and post-judgment interest at the highest rate allowed by law;
- H. Award Plaintiffs and the Classes their costs of suit, including reasonable attorneys' fees as provided by law; and
- I. Award such further and additional relief as the case may require and the Court may deem just and proper under the circumstances.

JURY DEMAND

Plaintiffs demand a trial by jury on all claims so triable as a matter of right.

Dated: April 22, 2021

Respectfully submitted,

SCOTT + SCOTT ATTORNEYS AT LAW LLP

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ATTESTATION OF YAVAR BATHAE

This document is being filed through the Electronic Case Filing (ECF) system by Yavar Bathae, who attests that he has obtained concurrence in the filing of this document from each of the attorneys identified on the caption page and in the signature block.

Dated: April 22, 2021

/s/ Yavar Bathae
Yavar Bathae